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THE AUTOMOBILE

NEW ROAD SPRINTING RECORDS SET UP on LONG ISLAND

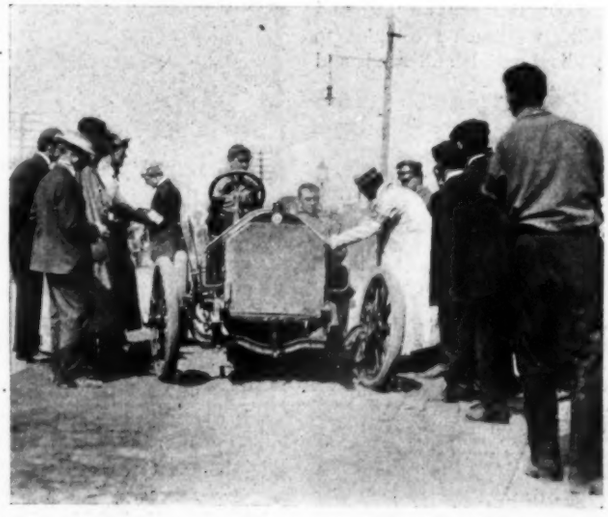
By John C Westmore

Finishing the Burst of Speed that Proclaimed the Hotchkiss the Star Performer of the Day.

STRAIGHTAWAY sprinting on an average American macadam highway had a renaissance on Hillside avenue, Jamaica, Long Island, Friday, June 5, in connection with the subway opening celebration, that might more properly be termed the inauguration of a new form of road racing in this country. Away back in 1901—November 26, to be exact—Henri Fournier made the first officially timed mile trial in a Mors machine, and set up a record of 51 4-5 seconds. That same day there were other trials by other classes of cars, including, by the way, a run by A. L. Riker in an electric racer. Old timers will remember standing in close lines as Fournier flashed by, missing the ignorant, foolhardy spectators and newspaper men almost by inches. Those trials on the Coney Island boulevard were the forerunners of another sprint meet, which took place on Staten Island on May 30, 1902, over a curved and ungraded course. The fatalities that were the outcome are a part of motor racing history, and resulted in sprint racing in this country being transferred to Ormond Beach. Since the Staten Island races there have been no sprint races to speak of on the public road beyond occasional minor attempts like those at Long Branch, Wildwood and Lowell. It is to be noted that that 51 4-5 seconds mile of Fournier's remained unbeaten until W. K. Vanderbilt, Jr., startled the world with his "39" at Ormond.

There have been annual sprint meets at Nice and Ostend, in France, and several of lesser note in England, but not until Friday last had any series of straightaway short distance races been attempted in this country. It is a gratifying sign of the times that road contest promoters now look first to public safety, and that it is so generally admitted that the highways must not be used for racing, except when due precaution has been taken to guard the course by soldiers in long distance and by police in sprinting events.

The Long Island Automobile Club, which cooperated with the subway committee in the promotion of the affair and managed outright the racing itself, saw to it that due protective precaution was taken, and the city of Brooklyn backed them up with over 500 policemen and cycle cops, who knew just what they had to do. Enough said. So well did the guards do their work that 20,000 people saw the races with safety, pleasure, and convincing profit.



Isotta, Winner of the Stock Car Chassis Event.

The course was a three-mile stretch, which was well oiled and rolled. It had two turns, but so gentle as to slow down the cars almost inappreciably. The mile racers had but a single curve to negotiate, and the kilometer sprinters none.

The outcome of the trials was not only a convincing demonstration of the speed possibilities of stock cars, but also an eye-opener to the progress that since Fournier's time has been made in the development of automobile speed. Even though the course, be it repeated, was but an average stone highway, figures

Scarcely a Vacancy in the Huge Grand Stand.

were set up that will compare favorably even with those achieved over the famous stretch of sand between Ormond and Daytona.

The king pin of the speeders proved to be the 120-horsepower Hotchkiss, which Elliot F. Shepard drove in the last Vanderbilt race, now owned by Harry Levey, an enthusiastic amateur, who came into the racing game at the last Ormond Beach race. With H. Kilpatrick at the wheel it scored 24 3-5 seconds for the kilo-

Part of the Decorated Parade That Was of Interest.

meter (90.93 miles per hour), 38 3-5 seconds for the mile (93.26 miles), and 1:19 1-5 for the two miles (90.90 miles).

The 20 seconds for the kilometer made by Guiness with a Darracq in France was not touched, nor was Demogeot's 58 2-5 seconds, made with the 200-horsepower Darracq on Ormond Beach, touched, but W. K. Vanderbilt, Jr's beach record of 39 seconds for the mile was beaten on this Long Island road, and

A Bunch of Hard-Working "Scribes" Looking Pleasant.

this best sets an estimate on the value of Friday's performance on Hillside avenue, Jamaica. This gives to Mr. Levey's car and driver American road records at all three distances and world's road records for the mile and two miles. The Ormond steam records for the mile and kilometer, 28 1-5 and 18 2-5, were naturally not approached.

In every event new stock car road racing records were set up to furnish standard marks, to be striven against at the future road sprint meets, which are bound to become popular and run in all parts of the country under adequate military or police protection.

The Isotta followed up its successes at Savannah and Westchester by evolving as the runner up to the Hotchkiss, the latter

The Acme, Winner of the $1,251 to $2,000 Class.

a specially built racing car, with a kilometer in 27 3-5, a mile in 42 4-5, and two miles in 1:28 4-5. It is to be noted that both the Hotchkiss and the Isotta were shod with Michelin tires.

The Fiat Cyclone sadly missed the pilotage of the late Emanuel Cedrino. George Robertson essayed the task and secured 30 4-5

Pennsylvania Car That Took Honors in Its Class.

for the kilometer and 46 2-5 for the mile. G. P. Parker, in a stock Fiat, attained a speed of 1:34 for two miles.

The class for four-cylinder cars over $4,000 attracted much attention. In it the Stearns duplicated its recent Fort George hill climb success by landing four machines over the tape, one, two, three, four, in almost equally fast time.

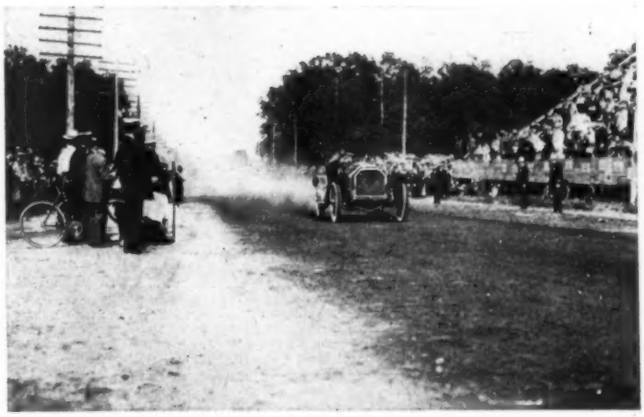
Jefferson deMont Thompson, the referee, was forced to disqualify quite a bunch of cars in this class for not meeting entry blank requirements, but generously and happily cut the Gordian knot by offering special cups for those he had had to put outside the mast works. The Hotchkiss, Isotta and Fiat finished one, two, three.

The six-cylinder Mora, a make to be seen in the Vanderbilt Cup race, signalized its racing début by winning the $3,001 to

$4,000 class. The Pennsylvania, whose speed was tipped so confidently at Savannah, made good by carrying off the $2,001 to $3,000 event. The Acme, another speedy Savannah contender, captured the $1,251 to $2,000 sprints. Among the little fellows under $1,250 there was nothing to it but the Mitchell, which finished first and second. The six-cylinder race went to a Stearns, driven by a private owner, with 1:36 2-5, 45 seconds, and 28 4-5 seconds as its highly creditable string of performances. A Thomas "Six" was at its heels. The stock chassis (301 to 550 cubic inches piston displacement) was a merry scrap, the two miles going to the Isotta, and the kilometer and mile to the Simplex.

Records Might Have Gone to Christie, But—

A car with a record of 35 seconds for a mile made on Atlantic City beach was on hand. Walter Christie had entered his meteoric direct-drive racer in all the free-for-all events, with a very reasonable expectation of gathering with his American-made car the record honors of the day. But Christie is often unlucky at such critical times as these. He was this time. The day before Morton J. Seymour, who made a most noteworthy début as a racing driver in the Briarcliff Cup contest, and had been engaged to pilot the car, met with an upset 24 hours previous, resulting in the demolition of the radiator.



Stearns That Triumphed in the Six-cylinder Trials.

How They Patiently Waited Back of the Line for the Crack of the Starter's Gun.

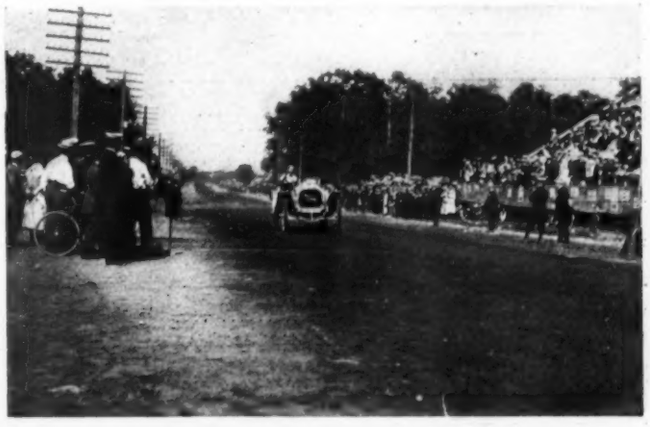
Though Christie worked all night at the job he was unable to replace it, and so decided to console himself with a waterless try at the kilometer. In a cloud of smoke, and spurting great sheets of flame from the exhausts, the crippled car bore down the stretch in an effort to overcome its handicap and snatch a cup and a record also, perhaps. It was a game try, under a big handicap, and netted Seymour 26 3-5 seconds.

Long Island Automobile Club Manages the Meet Well.

With A. R. Pardington and his associates of the Long Island Automobile Club's contest committee at the helm, the details, as might be expected, were carried out with perfection. The timing was done by Alden L. McMurtry's electric machine, the cars crossing wires connected with it at both start and finish, automatically starting and stopping the watches. S. M. Butler, Charlie Dieges and other members of the New York Timers' Club were on duty.

Fred J. Wagner, as usual, made a good job of the starting. With Harry Clinton, Mortimer C. Reeves and Tom Moon to help him, the cars were sent away so promptly that, despite the prophecy that the great number of contestants would not admit of a trial for all of them at all distances, the races were finished before seven o'clock.

It is safe to say that the Jamaica time trials will go down in history as one of the most successful events of the kind, and there is little doubt but that the numerous new records established on Friday last will require considerable beating before they go down before something faster, as the macadam of Hillside avenue developed speeds that were entirely unlooked for even by the old-timers, who had in mind all prior performances, and who realized how much more capable of getting over the ground modern cars are than their predecessors of several years ago. Seldom has such a crowd graced what was, after all, a purely local event, and chiefly of interest to Jamaica and its environs, and seldom indeed has a gathering of this size, for it was very conservatively estimated that there were at least 20,000 people in attendance along the course, been so well kept within bounds. As the photographs show, the racers had the entire road to themselves, and as it is a broad, level stretch, there was nothing whatever to hinder their progress in the slightest. There was an entire absence of that crowding out upon the course that has become a familiarly objectionable feature at most road events.



Mora Winning the $3,001 to $4,000 Class Event.

GASOLINE CARS UNDER $1,250

CAR	Entrant	Driver	2 Miles		1 Mile			
			Time	Rate	Time	Rate		
MITCHELL	Mitchell Motor Co.	O. R. Delamater	2:32	47.37	1:16 2-5	47.41		
MITCHELL	Mitchell Motor Co.	C. P. Skinner	2:41 4-5	44.52	1:16 1-5	47.43		
FORD	F. J. Nolte	F. J. Nolte	3:33	33.8	.....	.....		
FORD	R. J. Johnston	R. J. Johnston	4:16	28.12	1:30 1-5	40.10		

GASOLINE CARS, $1,251 TO $2,000

CAR	Entrant	Driver	2 Miles		1 Mile		Kilometer	
			Time	Rate	Time	Rate	Time	Rate
ACME	Acme Motor Car Co.	C. A. Patschke	2:07	57.09	1:03 3-5	57.	38 3-5	57.95
P. & S.	K. R. Manzille	K. R. Manzille	2:22 4-5	50.04	1:07 3-5	53.45	42 3-5	52.51
HAYNES	W. E. Shuttleworth	W. E. Shuttleworth	2:23	50.02	1:08	52.94	42 3-5	52.51
CADILLAC	J. D. Rourk	J. D. Rourk	2:27	49.10	1:12 3-5	49.52	43 1-5	51.78
JACKSON	G. J. Scott Motor Co.	Robt. Burman	2:29	48.30	.....	.....	44	50.84
MITCHELL	Mitchell Motor Co.	W. Olney	2:31	47.18	1:12 1-5	49.95	.....	.....

GASOLINE CARS, $2,001 TO $3,000

CAR	Entrant	Driver	2 Miles		1 Mile		Kilometer	
			Time	Rate	Time	Rate	Time	Rate
PENNSYLVANIA	Penn. Auto-Motor Co.	L. Zengel	1:53	63.7	:55	65.45	:34	65.79
CORBIN	Corbin Motor Vehicle Corp.	J. W. Swan	1:55 4-5	62.60	:57 1-5	62.93	:35 2-5	63.19
PULLMAN	Cimiotti Bros.	Robt. Morton	1:56 1-5	62.06	:56 4-5	63.38	:35 1-5	63.55
PULLMAN	Cimiotti Bros.	J. A. Kline	2:08	56.25	1:03 3-5	56.60	:39 3-5	56.48
POPE HARTFORD	A. G. Southworth	Philip Hines	2:08 3-5	56.05	1:02 2-5	57.69	:38 2-5	58.25
FORD	Bishop, McCormick & Bishop	Joseph Henry	2:10 4-5	55.30	1:05	55.38	:44 35	50.15
MIDLAND	Allenhurst Garage	"Deacon" Holmes	2:35	46.50	1:12	50.	.....	.....
IMPERIAL	H. H. Tredwill	W. H. Owen	2:58	40.45	1:08 1-5	52.78	:42	53.26

GASOLINE CARS, $3,001 TO $4,000

CAR	Entrant	Driver	2 Miles		1 Mile		Kilometer	
			Time	Rate	Time	Rate	Time	Rate
MORA	Mora Motor Car Co.	J. V. Dowd	2:08 2-5	56.05	.....	.....	.....	.....
CLEVELAND	Cleveland Motor Car Co.	W. A. Woods	2:12	54.54	1:28 2-5	40.63	:35 4-5	62.48
THOMAS	T. F. Chesebrough	T. F. Chesebrough	.....	.....	:57 1-5	62.93	.....	.....
STEVENS-DURYEA	J. M. Allen Co.	P. J. McDermott	2:16	52.94	1:08	52.94	:42	53.26

FOUR-CYLINDER CARS OVER $4,000

CAR	Entrant	Driver	2 Miles		1 Mile		Kilometer	
			Time	Rate	Time	Rate	Time	Rate
STEARNS	Allen-Swan Co.	Halstead Swan	1:48	66.66	:52 4-5	68.18	:33 4-5	66.18
STEARNS	Allen-Swan Co.	D. E. Farrell	1:49	66.08	:52 4-5	68.18	:33 1-5	67.37
STEARNS	Caleb Bragg	Caleb Bragg	1:51	64.88	:51 2-5	70.03	:35	63.91
STEARNS	James Doig	James Doig	1:55 1-5	62.	:54 2-5	66.17	:34 2-5	65.02
MERCEDES	E. R. Thomas	H. Johnson	1:54	63.15	:54	66.66	:33 4-5	66.18

SIX-CYLINDER CARS OVER $2,500

CAR	Entrant	Driver	2 Miles		1 Mile		Kilometer	
			Time	Rate	Time	Rate	Time	Rate
STEARNS	C. F. Alcott	C. F. Alcott	1:36 3-5	74.38	:45	80.	:28 4-5	79.32
THOMAS	E. F. Buchanan	E. F. Buchanan	1:49 1-5	66.42	:52 1-5	68.96	:32	69.90
ACME	Acme Motor Car Co.	C. B. Rogers	1:52 2-5	64.28	.....	.....	.....	.....
HOTCHKISS	C. F. Steppani	S. Carouso	1:53	63.15	:58 2-5	61.64	:37 4-5	59.17
MORA	Mora Motor Car Co.	J. V. Dowd	2:24 1-5	50.	1:06 1-5	54.40	.....	.....
FORD	J. P. Disbrow	J. P. Disbrow	2:00 3-5	59.40	:59	61.01	:36 1-5	61.79

FREE-FOR-ALL

CAR	Entrant	Driver	2 Miles		1 Mile		Kilometer	
			Time	Rate	Time	Rate	Time	Rate
HOTCHKISS	Harry Levey	H. Kilpatrick	1:19 1-5	90.90	:38 3-5	93.26	:24 3-5	90.93
FIAT CYCLONE	Fiat Auto Co.	G. Robertson	1:51 4-5	64.98	:46 2-5	77.58	:30 4-5	72.62
AMERICAN	Stewart Elliot	W. H. Owen	.....	.....	:58 4-5	61.22	:37	60.45
ISOTTA	C. V. Brokaw	J. Lang	.....	.....	:42 1-5	85.30	:27 3-5	81.05
FIAT	Fiat Auto Co.	G. P. Parker	.....	.....	:47 3-5	75.63	:28 4-5	77.67
CHRISTIE	Walter Christie	Morton Seymour	.....	.....	.....	.....	:26 3-5	84.09

STOCK CHASSIS, 301 TO 550 CUBIC INCHES PISTON DISPLACEMENT

CAR	Entrant	Driver	2 Miles		1 Mile		Kilometer	
			Time	Rate	Time	Rate	Time	Rate
ISOTTA	C. V. Brokaw	John Lang	1:29 1-5	78.94	.....	.....	.....	.....
FIAT	Fiat Auto Co.	G. P. Parker	1:32 4-5	77.58	.....	.....	.....	.....
SIMPLEX	Palmer & Singer	J. M. Seymour	1:44 3-5	68.96	:51	70.58	:32	69.90
PENNSYLVANIA	Penn. Auto-Motor Co.	L. Zengel	1:46 4-5	67.66	:51 1-5	70.31	:32 3-5	68.61
PENNSYLVANIA	Penn. Auto-Motor Co.	A. Gentile	1:55	62.71	:57 3-5	62.50	:37	60.45
MERCEDES	Broadway Auto Ex.	H. A. Hawkin	.....	.....	.....	.....	:44	50.84

SPECIAL CLASS FOR DISQUALIFIED CARS

CAR	Entrant	Driver	2 Miles		1 Mile		Kilometer	
			Time	Rate	Time	Rate	Time	Rate
HOTCHKISS	Harry Levey	H. Kilpatrick	1:20 1-5	90.25	.....	.....	.....	.....
ISOTTA	C. V. Brokaw	John Lang	1:28 4-5	81.08	:42 4-5	84.11	.....	.....
FIAT	Fiat Auto Co.	G. P. Parker	1:34	76.59	:46 3-5	77.25	.....	.....
AMERICAN	Stuart Elliot	W. H. Owen	1:40 4-5	71.42	:52	69.23	.....	.....
ALLEN-KINGSTON	W. C. Allen	Ralph De Palma	1:45	68.70	:52 2-5	68.44	.....	.....
MERCEDES	H. E. Trevor	H. E. Trevor	2:08 4-5	56.05	1:04 1-5	56.07	.....	.....
PEERLESS	Jack Rutherford	Jack Rutherford	1:56 1-5	52.94	.....	.....	.....	.....

Starting the Construction of Long Island Motor Parkway

Vice-President and General Manager Pardington Turns the First Spadeful of Earth.

WITH the turning of the first spadeful of earth at Central Park on Saturday by A. R. Pardington, general manager of the Long Island Motor Parkway, Inc., acting for its president, W. K. Vanderbilt, Jr., who was kept by illness in his family from participating in the formal start of the work on the project so near to his heart, the long dream of automobiledom for a stretch of road of its own on which cars may be driven at their utmost speed without danger to the general public is assured of realization.

A simple yet impressive and appropriate ceremonial had been arranged in celebration of an event so momentous to the motor car world, not only of New York but of the country at large. There were a few speeches by men who were well entitled to make them, and then following the tossing of the first spadeful of earth carts invaded the spot, a score of laborers attacked the soil with pick and shovel, and a stick of dynamite blew high in the air an impeding tree. An epoch in automobiling was inaugurated. An example was set which it is safe to predict other cities and populative centers will not be long in following.

Despite the fact that the place chosen to begin the work on the parkway was remote—a spot on the Jerusalem road near Central Park, some 30 miles from Long Island City and five miles from Jericho, on the previous Vanderbilt Cup courses—fully a score of automobilists from New York and surrounding towns were on hand with their cars to participate in the celebration. On a raised platform was a full band, which, previous to the ceremonies, gave a concert. The historic spot was roped in. Fringing the ropes were the automobiles and crowding them were several hundred Long Islanders, who had come afoot to witness the start of a work that will mean much to their prosperity.

Sharp at 3:30 o'clock, the time set for the beginning of the ceremonies, Mr. Pardington stepped to the front of the platform, and in an address all too modest gave more than the lion's share of the glory of the parkway achievement to Mr. Vanderbilt, expressed with emotion his regret that the president of the company had been kept away by serious illness in his family, and begged leave to read a brief address prepared by Mr. Vanderbilt, by way of expressing his feelings on the occasion:

We are here to-day to celebrate the commencement of work on a road, which, when completed, will give to the world one more mode of transportation. There have been in the past highways for all kinds of vehicular traffic, canals for the movement of freight, railroads for the transportation of passengers and trolleys for the convenience of those living in the suburbs of our larger cities, but in no case has the motorist been considered.

Although but a few years in existence, the automobile has come into such prominence that it has revolutionized all modes of travel. Distance has been eliminated, highways improved, unknown districts opened up, and pleasure given to thousands.

And now the day of the automobile has come. A highway is about to be constructed for its use, free from all grade crossings, dust and police surveillance, and a country opened up whose variegated charms are hard to equal in any part of the world.

We have encountered in our preliminary work of raising funds and procuring right of way many unforeseen obstacles. But land owners in almost every case, seeing what a benefit a road of this character would be to their property, gladly came forward with help, enabling us to complete a forty-five mile right of way.

Then came the panic. Hard times were ahead, and it looked serious for the undertaking. Discouraging reports were circulated, and other difficulties appeared. Nevertheless, with all these trials and tribulations, money slowly came into the treasury, and one obstacle after another was set aside.

So that here we are, eighteen months from the time the company was incorporated, ready to turn over the first spadeful of dirt, and this fall will see ready for use ten miles of the motor parkway.

Judge William H. Hotchkiss, president of the American Automobile Association, was next introduced as one who had been a great friend of the enterprise from its inception. The judge dilated eloquently on the value of organization, and on the benefits the building of such parkways would be, not only to automobiling, but to the general public as well. He said:

On behalf of the militant motorists of the nation, the twenty thousand who have organized that they might the better combat prejudice and the sooner compel fair treatment, on behalf of yet other thousands to whom a road restricted to automobiles is like a glimpse of paradise, on behalf of all the men who recognize in works like these the seven-leagued boots of Giant Progress, I congratulate you—I congratulate Mr. Vanderbilt, who conceived this enterprise, and you, gentlemen of the Parkway Company, who have assisted in carrying it through; and not the least, believe me, our old friend Pardington, who, six years ago, was in

President Hotchkiss of the A. A. A. Making His Address.

A Part of the Big Crowd that Witnessed the Ceremonies.

at the borning of that now thriving body for which I particularly speak, the American Automobile Association.

The occasion is epochal. When, long years ago, the mounted traveler on the public ways gave place to the stage coach, the first English turnpike was constructed—the stage coach road of our great-grandfather's great-grandfather. Then came the primitive steam car, and the man of 1830 thought to build a road to fit the new conveyance. They tried, and failed; the steam car took to the rails, and it now has rail-roads of its own. The roads of the stage coach remain stage coach roads still.

But now comes another self-propelled vehicle, a steam car in miniature, light, easily operated, reasonably safe in mature hands, but capable of great speed. It, too, has taken to the stage coach roads, but, unlike the steam car, it intends to stay there. It needs no rails; the stage coach road, brought up to date, is enough.

Enough, did I say? Not everywhere. In territories such as this—the neighborhoods of great cities and the districts of vast country estates and popular resorts—motor roads, limited to the new vehicle, especially constructed for it, like the railroads' private enterprises of a public nature, have become necessary, and the **Long Island Motor Parkway is the first of such roads anywhere in the world.** Here, to-day, then, the motor vehicle, as it were, takes to its rails, this parkway becomes the younger brother of the railroad, and the men back of it are as truly pioneers as those who stage-coached on rails behind the "DeWitt Clinton" from Schenectady to Albany nearly one hundred years ago.

The occasion is epochal in another sense. It is prophetic. If motor roads are necessary—and who here will deny it—how soon will it be before we need motor streets? Nay, do you not need them in New York now? And, if streets, bridges; and, if bridges, tunnels and subways? Indeed, the day seems not far distant when our great cities, particularly the metropolis, yielding to the demands of a majority of the people—for, before many years have elapsed, a majority will drive motor cars—will build elevated steel pavements up and down and across their main thoroughfares, over the necessary bridges, and connecting up at their termini with roads like this.

If such be the ultimate of this occasion, not a man here but will look back upon it with pride and gladness that he was present. Yes, even though, peering into the future through the binoculars of the Aero Club, and paraphrasing Faust, he boasts:

"A fiery chariot, borne on buoyant pinions,
Sweeps near me now. I soon shall ready be
To pierce the ether's high unknown dominions,
To reach new spheres of motor activity."

Workmen Getting Busy After the Speechmaking Ceased.

his time must bide our time. The motor vehicle will remain terrestial throughout our generation.

So, hail, the first motor parkway! And all hail, those pioneers—Mr. Vanderbilt and his associates—who, for the motorists of America and the world generally, are here blazing the trail for the motor roads, the motor streets and the motor bridges of the present motor age.

The next speaker was August Hecksher, a director of the parkway, also a highway commissioner of Huntington. Mr. Hecksher's theme embraced the wonderful progress in transportation during the past year, notably the building of the East river bridges and the completion of the tunnel all the way from City Hall, New York, to Jamaica. He characterized the parkway as an innovation which would prove almost as valuable to Long Island and New York as the bridges and tunnels themselves.

Milton L'Ecluse, a director of the Long Island Real Estate Exchange, dwelt on the great benefits the parkway would bring to Long Island in the way of attracting not only visitors but permament residents along its line.

John C. Wetmore, speaking for the New York automobile writers, congratulated antomobiledom and Long Island that their dream was at last to come true and prophesied that some day the fraternity and Long Islanders would erect a monument on the parkway to its promoters, and that high up on it would be the names of Vanderbilt and Pardington.

Racing Board Chairman Thompson Was Attentive.

The speechmaking was brought to a close by Russell A. Field, secretary of the Long Island Automobile Club, who spoke eloquently of the interest of the club in the parkway, and concluded with a glowing tribute of congratulation to the directors that they had secured one of their members, A. R. Pardington, to manage the enterprise. He said in part:

The beginning of this great boon to the motor-driven vehicle is certainly a welcome day to the Long Island Automobile Club and the newspapers in this vicinity. It will, from the turning of the first shovel of earth, give both something to talk and write about for generations to come.

This is no ordinary project, the inaugural of which we are here to honor and to witness. It is a most extraordinary and stupendous undertaking, the first private and exclusive automobile roadway to be built in the world. The engineers who, after months of research and thought, have worked out the details of this great motor highway, have written a text-book, the coming of which half the nations of the earth, who realize the necessity of such roads, have been waiting.

Before the races for the Vanderbilt Cup Long Island was to many people but a strip of land extending eastward from Brooklyn to Montauk point a hundred miles or more. The International struggles among the best cars Europe and America could produce, brought people to this island, revealed the multitude of its beauty spots, called attention to its advantages, brought desirable purchasers of its lands and good money into the pockets of its citizens. How much more then will the coming of this specially built highway redound to the lasting benefit and good of Long Island. Sixty-five miles of unexcelled going, stretching snake-like from Garden City to Riverhead, over hill and down dale, by lake and river, where the power possibilities and the requirements of safety are the only limitations to speed.

The mind breaks all records in contemplating this scene of motoring contentment. Speed is one of the assets of the motor car, of the same relative value as are its other superiorities over all other means of transportation. It is as natural for an owner to want occasionally to speed his machine and perhaps to match it

against that of his neighbor as it is for a boy to run a race with his playmate, or the horseman brush with his fellow admirer of equine beauty on the speedway.

Users of the public highways have been traveling for centuries in a machine-like, mechanical sort of way, undisturbed, careless and oftimes stupid in their driving, and it will take some time for them to awaken to the quick thought and keen perception necessary for the successful handling of any vehicle in this era of the motor. Until the time when they shall be so educated automobiles must have special parkways like this where the average owner may drive unhaunted by the specter of hidden speed traps, where the maker may thoroughly try out his creations to determine what points should be improved, where the dealer may demonstrate the stamina and speed boasted in the highly executed catalogues. We shall then realize the difference between 65 and 75 miles an hour. The Parkway may become a missionary of truth. If so, then so much the better.

There is another important phase of this great motor highway on which actual work is being started to-day, that is the practicability as a means of every-day travel from country home to business and back again in cleaner manner and faster time than existing railroads can furnish. The value of the real estate which will be in demand as home sites with the coming of the Parkway cannot be estimated.

The Long Island Automobile Club takes a warm and rather personal interest in the Parkway because the general manager so wisely selected by you is one of the men responsible for the formation of that club. We know A. R. Pardington to be a man among men, with unbounded energy, an unusual capacity for handling details, a beautiful sense of fairness and right, in short, the king pin for such an organization as yours.

It is a pleasure to state that during the preparatory period of the Parkway, when little news of progress was given out, not one of the Brooklyn newspapers ever thought or intimated that the road would not be built. A. R. Pardington was the general manager. He stated the project would certainly be carried through to completion, and, although readers were periodically served the same initial story with different garnishes, we were confident that such a day as this would come, when the result of his efforts and your efforts would burst into blossom and bear fruit.

The Long Island Automobile Club is as anxious and restless as you gentlemen for the completion of the Parkway. On the minutes of the organization month after month have been spread many questions regarding its progress. The members who have come here to-day will take great pleasure in seeing recorded the fact that the great project has actually been begun.

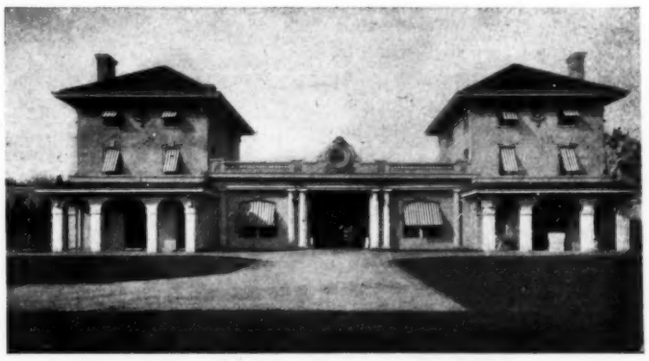
The Long Island Automobile Club wishes you godspeed in this work, it prays that neither commercial nor financial troubles may interrupt its progress, it sincerely hopes that accidents during and after its completion may be unknown, that success shall crown the efforts of those men who have believed in and loved Long Island enough to make the Parkway possible. These sentiments are, I know, not only echoed by the newspapers, but by every resident of Long Island.

Then once more expressing his regret that the one who should rightly have had the honor was absent, Mr. Pardington drove a nickeled spade deep into the sod, the band played, the crowd cheered, and the parkway was started. A rush of carts and laborers within the roped enclosure followed. Picks swung, shovels waved, and a Niagara of dirt fell into the wagons. A loud explosion of dynamite, a cloud of dirt and chips, and a tree had been blown from the parkway's path.

The place of beginning is about the center of an eleven-mile stretch, whose completion is guaranteed by contract in October, in ample time for practice for the Vanderbilt Cup race.

FIRST VANDERBILT RACE FOREIGN ENTRY A MERCEDES

THE first formal entry of a foreign car for the Vanderbilt Cup race has been made. It is a 90-horsepower Mercedes. In fact, it is the same car which Janatzy drove in the last international race on Long Island. Its entrant is Robert Graves, a member of the Racing Board, who has made former entries of Mercedes to these races. The making of the entry was a feature of the visit of the newspaper men and others to Mr. Graves' automobile lodge at Mineola, following the motor parkway inaugural ceremonies on Saturday. At the conclusion of the luncheon the host of the occasion handed to Jefferson deMont Thompson the entry, accompanied by a check for $1,000 for the entry fee. "I have not named a driver," said Mr. Graves, "but I am going over to the Grand Prix to secure one." I have a bug in my bonnet, by the way, to also enter an American car, for I can see nothing in the rules to prevent making more than one."



Automobile Lodge of Robert Graves at Mineola, Long Island

Mr. Graves in building this private garage has set an example which may be a precedent among enthusiastic followers of the sport. It is more than a mere garage. It is an exclusive automobile lodge for the entertainment of motoring parties. It will also be a garage for the big stable of racing cars he is to establish at this convenient point, which is less than a quarter of a mile from the beginning of the parkway.

Reposing against a background of stately green cedars the soft gray concrete walls of this restful retreat are livened up here and there by heavy tile roofs of rich red. The dainty proportions and clean outline of the structure, which is purest Spanish Colonial in design, suggests to the eye of the beholder a gem of pearl in a sea of velvety emerald lawn. Two wings, each a complete building in itself, with sloping tile roofs over their three stories and with further dashes of the same rich deep blood-red in the tile roofs of their gracefully arched porches, are connected by a long stretch of columnar façade, making a spacious car room, with machine room behind.

The west wing of the building is used as living quarters by the owner and his guests, and in the east wing are numerous rooms for employees, a complete stable, and carriage room on the ground floor for casual visitors from across country.

For beauty of design and convenience of arrangement the building surpasses any structure heretofore erected for an owner's private use. The owner's desire was to provide numerous original contrivances which his own ingenuity and extensive familiarly with the machine convinced him as being essential.

From extensive glass skylights over the large car room and machine room the entire garage is bathed in floods of beautiful golden light. There is installed an electric clock, with adjustable time set and switches in the owner's quarters, controlling simultaneously in each guest's and chauffeur's bedroom electric lights and alarm bells for arousing the slumberers to the fray.

CHADWICK SIX FOR THE VANDERBILT CUP RACE

PHILADELPHIA, June 9.—Although it is stated that the makers of the Chadwick car, the Chadwick Engineering Works, had decided to be represented in the Vanderbilt some months ago, official announcement to that effect is just made public. H. B. Larzelere, the company's sales manager, states that the announcement was deferred until an opportunity could be had to show what the Great Chadwick Six could do, this being presented by the recent Giant's Despair and Dead Horse Hill climbs, in which it triumphed in no uncertain manner.

ORPHANS' DAY'S FOUNDERS CELEBRATE

THANKS to the institution of Orphans' Day by the New York Motor Club, the hustling promotion of the affair by Automobile Row dealers, and the added liberality of owners in also contributing cars and money, this greatest of motor car charities was celebrated in this city on Tuesday, with as much success as ever. Fifteen hundred boys and girls from ten of the city's orphanages were given a ride in 150 automobiles and motor trucks to Coney Island and a whole day of revel at Luna Park.

Where the Parade Started on Broadway at 54th Street.

With the New York Motor Club, the originator of the idea in this country, in a temporary and perhaps transitory trance and Sam Miles, who has been stepfather and head nurse to the little ones at former celebrations, touring in Europe, it looked pretty dark for an Orphans' Day outing in this city this year. "Senator" Morgan, in whose fertile brain this charitable function originated, however, came to the rescue, and, with characteristic hustle, soon had a Committee of Fifty signed to his promotion pledge and a resultant meeting called. The good fellows of Automobile Row responded very generally and promptly put the necessary committees to work in charge of Alec Schwalbach.

Some of the leaders thought it would be an efficient policy, in view of the eleventh hour rush, to put through the affair on a "bluff," based on the number of cars the tradesmen thought they could recruit among their customers. As the day drew near both money and cars were alarmingly lacking, and then appeals and personal canvasses were tried. The old method proved effective and saved the day.

Up to the eve of Orphans' Day, however, though Automobile Row had contributed its cash as well as cars liberally, the food problem faced the committee. Who was to supply the luncheon, as Sir Thomas Dewar, George Kessler and Col. Clifton had done at the three previous celebrations?

Late Monday afternoon, however, a Baron Bountiful was forthcoming. Ray M. Owen, sales agent for the Reo and Premier, called up headquarters, inquired into the finances, and offered to stand treat himself to the 1,500 little ones.

At ten o'clock the four streets from 54th to 57th west of Broadway were filled with automobiles and motor trucks filled with happy, laughing boys and girls, packed away like sardines in a box, so that as few as possible would have to be left at home. In fact, 150 larger children were sent down to Luna Park by the subway and elevated lines. Half an hour later the parade got under way down Broadway, across 48th street to Fifth avenue, and thence to the Bowery. At Mott street ten cars bearing 150 Italian orphans joined the procession and went with it across Williamsburg Bridge, through Prospect Park and down the Coney Island Boulevard to Luna Park, whose management threw open its gates free to the children.

At Coney Island the Youngsters Had a Glorious Time.

After a hearty luncheon the orphans stormed the many shows, shot the chutes, slid the slides, and saw the sights of the wonderland of which for weeks they had dreamed.

And yet there were close to ten thousand of the little ones left at home because but 150 of the 10,000 automobile owners of New York thought it worth while to give the city's orphans a ride in a motor car and a day at Coney Island. Ask the 150 whether they got their reward.

THOMAS PROTESTS PROTOS AND DEMANDS THE CUP

ALTHOUGH matters have been considered as settled by the decision of the French committee to allow the German car to continue with a 30 days' penalization, no objection to the decision of the committee having been made at the time it was promulgated, the Thomas company has filed a further protest against the German car, on the ground that, in view of the much greater mileage covered by the Thomas, it is not fair for it to compete against the German alone. A formal demand for the cup is accordingly made by E. R. Thomas.

Late advices from Pogranitchnaya, via Nikolsk, Siberia, received by the New York *Times*, show both of the remaining competitors to be having a pretty strenuous time of it. The Protos was wrong side up at the bottom of a gully after it had taken to the road, through being forbidden to further use of the railroad right of way, and the Thomas was proceeding on the tracks with a railroad official, followed by a hand car carrying a telegrapher, a crew of coolies and a supply of planks to bridge unballasted stretches. This was after a three-day delay caused by the Thomas stripping its driving gears through running over unballasted ties, Schuster having to take the train to Harbin for replacement parts. Grand Duke Serge Nicholovitch, one of the Russian committee, has just been through the territory now being traversed by the cars, and has ordered that every assistance be given them.

LUBRICATION ON THE MODERN AUTOMOBILE

By ARTHUR H. DENISON.

IN the modern gas engine there are moving parts subject to very high temperatures and pressures, and this has naturally brought about the development of lubricants suitable for these conditions. Lubricating oils are one of the products of crude oil or petroleum, either volatilized by the action of heat or separated by other methods. The operator of a car does not need to know the chemical composition of oils or the refining operations necessary to their manufacture, yet knowledge of the necessity for oils, and the many places where they are needed is

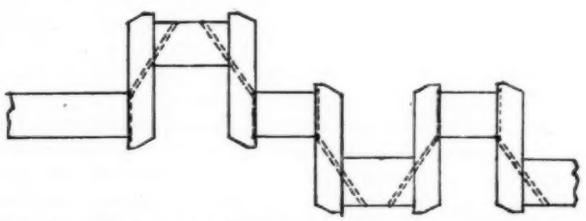


Fig. 1—Section of crankshaft for four-cylinder motor, having five main bearings, and showing one method of drilling shaft to lubricate connecting rod bearings.

absolutely necessary to insure the auto's successful operation.

The primary value of an oil is its ability to keep the two surfaces it is intended to lubricate separated, thus reducing friction. Friction is present in all moving objects and in machinery is due to minute irregularities in both surfaces, which, when viewed under a microscope, seem rough like files. Extracts from the laws of friction that need to be considered here are, "Friction varies with pressures, increases with the roughness of the surfaces, and is diminished by polishing or lubricating the surfaces. Considering the law—"Friction is diminished by lubricating the surfaces;" a suitable oil will both fill the minute irregularities and maintain a film between the two surfaces, preventing them from actually coming in contact. There is always pressure on a bearing, and the effect is a tendency to separate the molecules of the lubricant, forcing enough out from between the surfaces to allow the metals to come in contact. The value of an oil, therefore, is its ability to resist the tendency to be forced out of the bearing. In opposition to this tendency to separate the molecules is the force termed cohesion, or in oils, viscosity, meaning the attraction of one molecule for another; consequently the higher the viscosity of an oil the more suitable it is in bearings subject to heavy loads.

Friction always generates heat and an increase of one degree causes a proportionate increase in volume, the molecules of the substance being driven further apart and the force of cohesion lessened. If the temperature is raised sufficiently and the substance vaporized, the force of cohesion is overcome entirely. The manufacturer of oils to-day provides different grades for almost each class of work. Oils intended for use in machinery, such as sewing machines, bicycles, guns, etc., are not subject to heavy loads or heat, therefore, the composition of the oil is determined with regard for these conditions. Oils for steam engines must withstand the temperatures and pressures of steam, that of saturated steam, or of steam in contact with water, is about 225 degrees F. The flashing point of these oils is so low that when subject to the temperatures of the gas engine they would be readily decomposed.

Oils of High Flash Point Are Required.

The temperature of the burning gas, during the time combustion is in progress, is estimated at 2,500 degrees F. and upward. The melting point of cast iron such as the material in the cylinders is between 2,200 and 2,300 degrees F. On the other hand, the oil and cylinder walls are subject to these temperatures for a very short period of time, in a motor of 5-inch stroke, running at a speed of 600 r.p.m., the length of time the maximum temperature would be maintained is approximately 1-40 of a second.

Taking into consideration the cooling influence of the water jacket, also that of the gas introduced on the suction stroke, the average temperature of the cylinder walls is estimated at about 500 degrees F. Fluids are poor conductors of heat, consequently the oil film on the cylinder walls protects the cylinders to a certain extent. The best temperature of the water, in water-cooled engines has been ascertained to be about 210 degrees F., and this would leave the mean temperature of the cylinder walls about 350 degrees. The fire test of a good lubricating oil should be at least 400 degrees F., so there is a reasonable margin of safety. The water-cooling system is not intended to keep the motor cold, merely cool enough to preserve effective lubrication, and any surplus oil is burnt off and passes out with the exhaust gases, becoming visible as white smoke on being discharged into the atmosphere. The expansion of pistons and cylinders due to friction is not taken into serious consideration, the pistons being machined small enough to allow for expansion due to the temperature during combustion, and the elasticity of the piston rings is sufficient to take care of anything short of overheating.

Carbon, which enters largely into the composition of oils, is separated by the action of the intense heat and is deposited on the walls of the combustion chamber, plugs, etc., therefore, using an excess of oil causes various forms of trouble. The carbon becoming incandescent, may fire a charge of gas prematurely, causing excessive strains on the piston, piston pin and crankshaft. The motor will also pound, giving a sound similar to that when the spark is advanced too far with the motor running slowly, and under a heavy load. The ignition plugs will be fouled or short-circuited and the motor is liable to overheat. Considering, finally, the length of time needed to make proper adjustments, and that of clearing the cylinders of the carbon deposits, there is no reason or excuse for having a car in every day use smoking like a locomotive. To insure sufficient oil reaching the cylinders, a groove is usually turned in the cylinder walls, at a point low enough to prevent oil being taken directly into the combustion chamber. Shallow oil grooves, turned in the piston, or a ring placed below the piston pin, pass this every stroke and carry up a certain amount of oil, depositing it on the cylinder walls, the upper rings then collecting and carrying it to the top of the cylinder.

Poor Lubrication Affects the Compression.

The oil working into the minute irregularities between the piston rings, their grooves and the cylinder walls, has much to

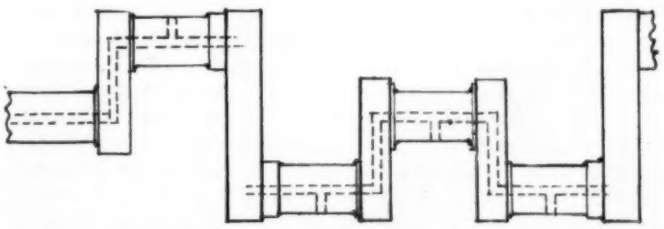


Fig. 2—Section of crankshaft for four-cylinder motor, having three main bearings, and showing method of drilling crankshaft to lubricate connecting rod and bearings.

do with the ability of the piston to hold compression, especially if the rings or cylinder are somewhat worn. This will be noticed by the driver who has given the cylinders a bath of kerosene to clean them. It will be found that the compression will leak out very much quicker than when the cylinders have plenty of oil. Some manufacturers using quantities of oil in the oil-pan have found it necessary to put baffle plates at the bottom

of the cylinders, leaving room for the movement of the connecting rod, and yet found that plenty of oil reached the cylinder walls. Without the baffle plate so much oil was taken into the combustion chamber that the motors constantly emitted a dense smoke, and were bothered a great deal with carbon deposits. The usual location of the camshaft is in the crankcase so that oil is splashed on it by the connecting rods. If placed there it never needs attention so far as oiling is concerned. Some designers place it in a separate compartment and fill this with oil or grease but this system has no particular advantage.

The connecting rod and crankshaft bearings must be provided with plenty of lubricating oil and it is common practice to use one grade of oil in the engines. There is a pressure on the piston and transmitted directly to the crank shaft, at the beginning of the power impulse, of between 10 and 18 atmospheres, depending on the amount of throttle opening, and the oil must have sufficient viscosity to maintain a film between the bearings and crank pins that will cushion the sudden force of the explosion. Here the expansion due to friction is very important and the design must provide for sufficient lubrication, also sufficient bearing surface so that the heat generated may be readily dissipated. If the bearings run hot, the crankshaft becoming heated must expand, likewise the bearings, and the two expanding uniformly in all directions, will grip each other much tighter, using much more power and either shaft or bearing will be badly cut. If the heat is increased to the danger point the bearings will be burnt and connecting rod or crankshaft is very liable to be broken.

How the Lubricant Reaches the Bearings.

Figs. 1 and 2 show two different methods of drilling the crankshaft to convey the oil to the crank pins, and it will be noticed that the oil holes discharge at the highest point of the revolution, corresponding to the position of the piston at the beginning of the power or firing stroke. The supply is received by the main bearings from the oil pump and the oil hole in the shaft, coinciding with that from the oiler has a little oil forced in each revolution, and generating centrifugal force throws it rapidly through the passages. The majority of modern motors are equipped with splash lubrication and have the connecting rods dip into the oil each revolution and splash it all over the inside of the crankcase. Some types are equipped with a scoop pointing in the direction of rotation, at the lower end of a passage connecting with the crankpin. The oil is sent into these passages with considerable force, owing to speed of rotation, thus assuring sufficient oil to the connecting rod bearings.

This is worked to the ends of the bearing and thrown off in the shape of a fine mist that penetrates to every part of the crankcase. The oil splashed onto the lower cylinder walls and not carried up by the piston is caught in little troughs, cast in the crankcase and drilled so that the oil runs down to the main bearings. In addition to the pipe from the oiler, the better designs provide an oil wick or an oil ring or chain, all types carrying oil from a shallow pocket corded in the bearing cap, the wick by capillary attraction and the ring or chain, revolving with the shaft, their lower ends immersed in the oil will carry up a considerable quantity that will spread over the shaft. This oil ring system is used very successfully in electrical machinery. With a splash lubrication it is advisable to drain the crankcase at frequent intervals, and put in a fresh supply of oil.

The modern ball-bearing gear box requires but little attention. Periodic filling with suitable lubricants is sufficient. On chain-driven cars the gears and differential are usually exposed by lifting one cover. On shaft-driven cars the differential and rear axle system requires a certain amount of attention, as too much oil in the differential is liable to leak through the axle sleeve and hub, usually getting on the brake drums. If this happens, the best thing to do is to jack the wheel up and squirt gasoline on the drum, slowly revolving it meanwhile. Manufacturers usually put a plug in the differential case showing the proper height at which to keep the oil level. The gear box should be kept a little less than half full. If too much is put in, the oil will be thrown out of the shaft and bearing housings, but a little leakage does no harm as there is always dust present and the oil leaking will serve to fill the crevices and make the case dust tight. In regard to the wheels, universal joints, clutch, and many little places about the car, all need attention occasionally.

Care in Oiling Is a Prime Necessity.

The wheels should be cleaned and packed with grease once or twice a season. Universal joints at intervals necessarily shorter. Latest designs provide for their lubrication through the shaft from the gear box. Earlier types are best packed in grease and enclosed in a leather boot. On many shaft-driven cars, where the shaft runs through a sleeve, daily attention should be given. The lack of a few drops of oil may rob the car of 50 per cent. of its power. Multiple disc clutches use oil or an oil and kerosene mixture, and the tendency seems to be for the oil to gum. Their action when slipping or dragging is sufficient indication as to when they are in need of attention. Leather-faced clutches will work much better when cleaned with kerosene and given a dose of neatsfoot or castor oil. The oil should be spread over the surface of the leather by using a long knife blade, or by running the motor for a few moments with the clutch released. When treating the clutch leather this way it is better to let it stand over night if possible, and with the emergency brake lever, or a block of wood against the pedal hold the clutch disengaged. A hand oil can with a long spout is almost indispensable, and the starting crank, the steering pivots and connections and the spark and throttle connections, gear control and emergency brake levers, clutch and brake pedals, shafts and connections and the fan bearings will all work much quieter and sweeter for a few drops of oil regularly. It is the practice of drivers to fill the oil can from the cylinder oil supply and this practice is to be commended, as many lower grade oils contain acids strong enough to etch steel.

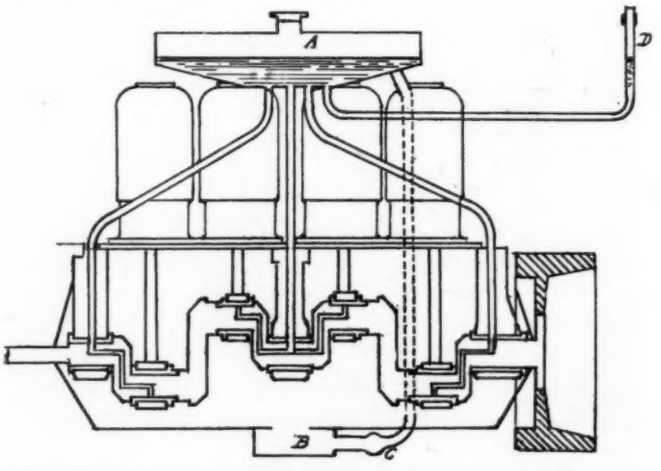


Fig. 3—Continuous circulation oiling system of Pierce Arrow. The oil flows from the crankshaft into the oil well B, and is pumped from there into the tank A, at the cylinder heads. It flows by gravity to the main bearings, and oilways drilled in the crankshaft to the connecting rod bearings. The oil pump, not shown, is at C. D is a glass showing height of oil in the reservoir.

Here is a quick and simple method of oiling driving chains when touring, or in a hurry. Fill an oil gun with oil and direct the stream of oil out of its spout so it will fall on that section of the chain stretched between the top of the sprockets, and so the oil will reach each link. This is easily accomplished by varying the pressure on the piston of the oil gun. The links on the sprockets may be reached later and the oil on the free links will drip off and in falling will strike the lower section of the chain, thus lubricating its links. Driving chains when dry will make a disagreeable noise and often cause a jerky motion of the car that may be easily misunderstood as something serious.

The best method of lubricating chains is to clean them thoroughly in kerosene, then boil in a preparation of graphite and tallow that can be bought for this purpose. By this method, the grease is driven into all joints and will last longer, and by keeping the dirt out, will reduce the wear. After removing the chain from the lubricant the surplus should be removed with a cloth. The timer should be cleaned with kerosene or gasoline at regular intervals, and a little oil or thing grease put in. Graphite, which is not affected by temperatures of 2,000 degrees F., may be used to good advantage in many places, though it must be handled carefully, as there is danger of clogging the passages. It is very beneficial in the cylinders, filling the pores of the iron, and it preserves its lubricating qualities indefinitely. When using it the manufacturers' instructions should be followed closely.

Various Methods Employed on Automobiles.

The history of lubricating devices shows the use of many different types—individual oil cups with gravity feed, reservoirs with the oil flowing by gravity through sight feeds to the motor, some controlled by hand—and the operator's memory—others interconnected with the switch. Exhaust pressure has been used quite extensively in four-cylinder vertical motors, and crankcase pressure in the two-cylinder horizontal opposed type. Current practice now indicates a tendency among designers to use systems that may be trusted absolutely and to that end many of the better cars have force-feed oilers with either gear or flexible shaft drive. The steel spring belt and leather belt drives seem popular, but chains do not seem to be used very much. The latest system coming into general use is a continual circulation system. An oil level in a crankcase is maintained by means of holes drilled at a certain height, the extra oil flowing through these holes to an oil well.

It is drawn from here by an oil pump and forced to the cylinders or main bearings, and the unused oil dripping to the oil pan and from there to the oil well serves to keep up a continual circulation. Another design somewhat similar, pumps the oil to a tank near the cylinder heads, and it flows from there by gravity to the main bearings. These systems are very reliable and are usually provided with some means of ascertaining the amount of oil in the reservoir. The oil circulated practically similar to the water in the water-cooling system does not require the daily attention and filling of tanks that the other systems require. The oil gradually loses its lubricating qualities and after running some time it is advisable to drain the old oil off and put a fresh supply in. The makers' instructions will give necessary information in regard to the mileage on one filling. Splash lubrication is provided for on all but a very small percentage of American cars, without regard to the system used—whether force-feed or continual circulation. Many high-powered cars are fitted with a reserve oil tank holding from one to three gallons, and on some cars the tank and the method of raising the oil to the oiler could be greatly improved.

American Cars Show Great Diversity of System.

There are no fixed rules in laying out a lubrication system. One American car, with a motor developing nearly 60 horsepower, has two sight feeds, feeding the crankcase only and depending on splash lubrication altogether. Another high-grade car, rated 50 horsepower, has a gear-driven oiler on the dash with ten feeds, four to the cylinders, five to the main bearings and the tenth to the timing gears. The majority of cars seem to use from four to eight feeds. Fig. 4 shows a method of oiling the cylinders from one feed and distributor and insuring an even supply of oil to each cylinder. The same system may be applied successfully to the main bearings and the maze of pipes seen on some cars thus done away with. This method would not preserve the value of the pressure feed to each point, though the pressure from the pump would be present to the discharge point.

Designs have shown both extremes. One high-grade car appeared on the market with oil pipes, sight feeds, reservoirs, pumps, in short everything pertaining to the oiling system that could be placed on the dash was there, then other models have been brought out with only a button for stopping the motor by short circuiting the ignition current. It will be noticed that the majority of cars with an oiler on the dash show plainly the effects of the oil leaking, rotting the rubber mats and soiling anything and everything it comes in contact with. Modern oilers have been developed to such a stage that they may be almost absolutely relied upon, and there is no reasonable excuse for their presence on the dash. It is of interest to no one but the driver and he has plenty of opportunities to test or watch its working if placed in its proper place—under the hood. Compression grease cups are used to advantage on many cars with the camshaft, and rocker arms at the cylinder heads, but the grease cups employed have usually been of small sizes, either 3-4 or 1 1-2 inches in diameter. The smaller sizes in particular are very inconvenient to handle, as they are built with a flat head, and the edge knurled to allow the fingers to grip it. Were the manufacturers to design these plain types so that the head was slotted to allow the use of a screw driver, it would be quite a big improvement.

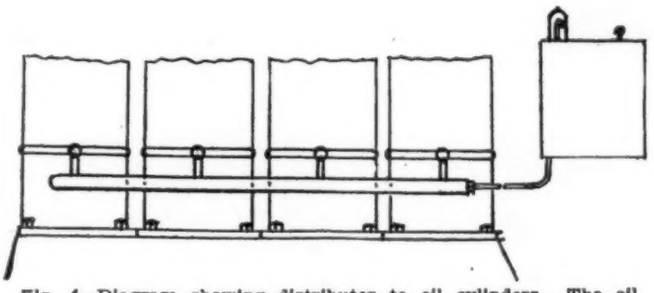


Fig. 4—Diagram showing distributer to oil cylinders. The oil pump forces the oil into the long tube, and from there it rises vertically an inch in order to insure equal pressure on the connections to each cylinder. Placing check valves at the top of this short vertical pipe would be good practice, but it is not absolutely necessary.

Conversation with the foreman of the assembling and repair department in a factory recently brought forth the following: "Most of the steering gears we have overhauled were in a condition that seemed to indicate that they had not received oil or grease since they were assembled in the factory. Lubrication is always provided for, a small plug or screw closing the oil hole. The steering gear (worm and sector casing) should be filled with grease at short intervals. Ball-and-socket joints on the steering connections will give best results if enclosed in leather boots, filled with grease."

Detecting the Poorly Lubricated Motor.

Oil leads should be cleaned out occasionally with gasoline, compressed air or steam, the latter being the best. A motor properly lubricated will not stop at once when the ignition is cut off. It should turn over several times, depending on the energy stored in the flywheel, and after the last complete revolution has ended the flywheel should swing backward and forward a few times before coming to rest. Were the cylinders taken off the pistons would be found on the same horizontal

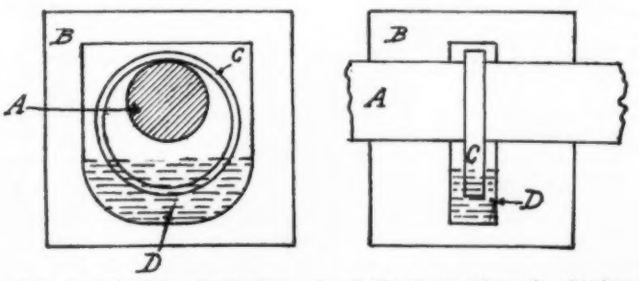


Fig. 5—Principle of oil ring. A, shaft; B, bearing; C, oil ring; D, oil. The oil chain is very similar, the flexible links conforming to the contour of the shaft for the upper half of its circumference.

plane (or very nearly so). If the motor stops quickly with a slight jerk, it is either very stiff or dry; stiff if the bearings have been taken up very recently. To get the best results the oilers should be adjusted so that when the motor is running at medium speeds, very faint traces of smoke should appear, vanishing at a distance of six to twelve inches from the end of the muffler discharge pipe. This adjustment will be readily found after a few trials. If in any doubt as to whether the motor is getting enough oil or not "open" the oil pumps so that more oil is fed. Better too much than too little always, and with modern systems it is hard to get an excessive amount for the reason that the speed of the oiler is in the proper proportion for the motor.

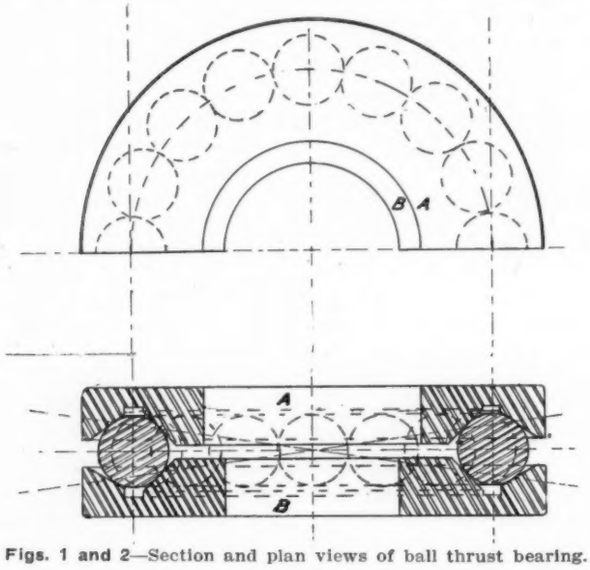
Many oils contain acids that will etch steels readily. The following is recommended as a test: Soak a piece of waste in the oil and wrap around a piece of polished steel, and place in the sun. If there are acids present the face of the steel will reveal their work in an interval of from a couple of days to a week, depending, of course, on the strength of the acids. This is another reason why only the best oils should be purchased, whether used in the cylinder or the oil can.

The manufacturer of your car has used plenty of oil in running the motors in, and the shop and road tests. He is constantly experimenting with new oils that are sent him by the refiners to be thoroughly tried before they are placed on the market as suitable to his motor. He issues an instruction book that contains explicit directions in regard to the amount of oil to be used, also information about oiling the wheels, transmission system, etc., in some cases going as far as to paste a copy of oiling instructions on the framework of the body where it must be seen every time that the gasoline tank is filled. This also recommends the use of well-known oils, all perfectly adapted to the places they are intended to lubricate. When touring carry a spare gallon along with you, and if you should run short and cannot get your usual grades, insist on being furnished with a standard make of oil as near like your regular grades as possible. Buy the best you can get. You may save a few cents per gallon by using a cheaper grade of oil, but it would take the savings on a great many gallons to cover the expense of having your cylinders rebored and pistons or rings replaced.

AN INSTANCE OF ACCURACY REQUIRED IN CONSTRUCTION

By J. T. GRIMSHAW.

IT is only those who are engaged in the most important positions in an automobile factory who understand and appreciate the mechanical refinements necessary to the production of duplicate parts. The proverbial hair's breadth is no fit simile for the accuracy commonly required. The average diameter of a hair from a human head is about one and three-quarter thousandths of an inch, and there are a multitude of automobile parts which if finished that much too small would be consigned to the scrap heap, or if that much too large, would have to be gone over again and brought to size.



Figs. 1 and 2—Section and plan views of ball thrust bearing.

Below are shown drawings of a device used in a large automobile factory for the production of absolutely duplicate ball thrust bearing races. Fig. 1 is a section, and Fig. 2 is a plan view of one-half of a ball thrust bearing. In such bearings it is absolutely necessary that the ball races be as near alike as mechanical skill and ingenuity can make them. That is to say, suppose the discs *A* and *B* were laid separately with their races uppermost and a set of balls placed in each, the distance from the center of any ball to the center of the ball diametrically opposite to it must be the same in *A* as in *B*, as shown in Fig. 1. The discs are tool steel hardened and ground to size, and the size of the races such as to hold sixteen 5/8-inch steel balls with 3-32-inch to spare for clearance; that is 3-32-inch divided by sixteen (the number of the balls) equals about 59-10,000 in an inch clearance for each ball, permitting its free running in the race.

Fig. 3 shows an indicator with the front plate or guard left off. It consists of two 5/8-inch steel balls, same as used in the bearings fitted and soldered with soft solder (so as not to draw temper from the balls) to two sheet metal pieces, one of which is fixed rigidly to the back or main plate; the other is hinged onto a taper pin screwed into the same plate with a jam nut in the back. The pointer of the indicator is hinged in the same manner, the movement of the pointer on the graduated scale being approximately 63 times as great as any existing error in the ball races.

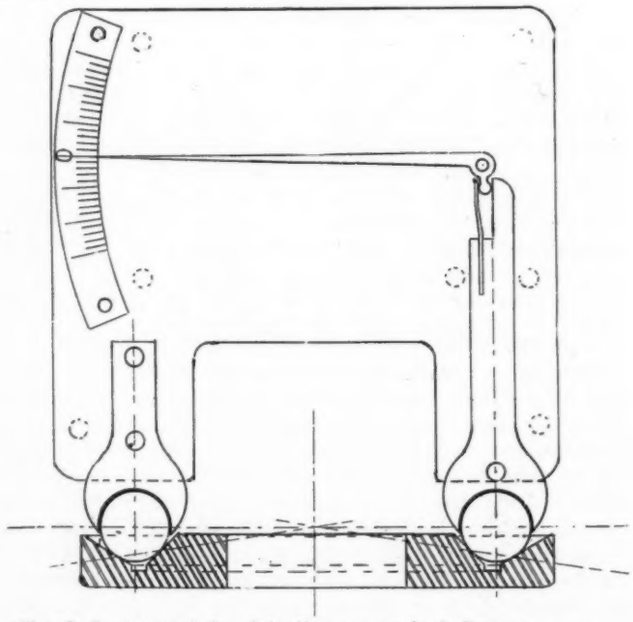


Fig. 3—Instrument for detecting errors in ball races.

It will be seen, therefore, that these races will be remarkably accurate, when it is remembered that the operator is allowed no leaway, but must finish exactly to size with the indicator at zero, representing almost mechanical perfection, and this is only one of the many instances where the same accuracy is required.

LETTERS INTERESTING AND INSTRUCTIVE

WHAT IS BAD PRACTICE ON THESE TWO POINTS?

Editor THE AUTOMOBILE:

[1,406.]—There seems to be a diversity of opinion among intelligent autoists as to the advisability of the use of graphite in the crankcase. Some advise mixing a teaspoonful of flake graphite with every quart of cylinder oil put into the crankcase for the purpose of lubricating the cylinders, saying it will give a fine surface to the inside of the cyliniders if so used. Others say it is a very bad practice, as it will cause the pistons to bind. (See Automobile Catechism, Sec. 189.)

Again, in case the chain breaks on a chain-driven car, the "Automobile Catechism" says: "Fasten the sprocket at the end of the countershaft from which the chain is gone. The car then can be driven home by the other chain. (See Catechism, Sec. 274.) To this some say it is bad practice; better draw your car home, as the strain on the differential gears is too severe.

Meriden, Conn. GEORGE A. FAY.

We understand that graphite is very successfully employed as a lubricant on the automobile and tests have shown it to be highly effective for some of the numerous special conditions to be found on the power-driven vehicle, but, like everything else, this is something about which many of the experts and "near experts" hold entirely opposite opinions. The experience of a few autoists who have used it in this manner should go further toward settling the matter than a great deal of theory, and we invite those who had occasion to use this lubricant to give their opinions as to its value for the purpose.

Driving the car by a single chain naturally imposes a very severe strain on the differential, but if properly carried out there is no reason why it cannot be done without causing any injury to the car, particularly where a long tow home is the only alternative. Flood the differential with oil before attempting to subject it to the extra strain and drive slowly. A little care will avoid any chance of injury as well as the tow. Where some distance is to be covered it would be well to examine the differential from time to time and keep the supply of oil replenished, as this will save it.

GEAR RATIO FOR A LIGHT FRICTION DRIVE.

Editor THE AUTOMOBILE:

[1,407.]—I am rebuilding a small automobile which will be driven by a "one-lunger," 3 1-2 bore and 3 1-4 stroke, making from fourteen to eighteen hundred r.p.m. Transmission is to be through a friction drive by a single chain to the periphery of the differential. The friction disc and driven wheel of the transmission are each twelve inches, and the wheels of the car are twenty-six inches.

Will you kindly advise me what size sprocket to use on the jack shaft, and also on the differential. I find your department "Letters Interesting and Instructive" of great assistance to me.

New York City. J. HALLOCK WARING.

As your motor will naturally have to run very fast when developing its normal power, and as the friction driving gear you mention permits of the driven wheel being revolved at a very high speed, it will be necessary to use an extremely low gear ratio. For instance, with sprockets of the same size on both countershaft and differential, the latter would be turning at the rate of 1,800 r.p.m. when the motor was running at the same speed, assuming that the percentage of slip in the friction gear is practically negligible at this high speed. As a 26-inch wheel covers 6.8 feet per revolution, this would mean a speed of better than two miles per minute, again assuming the motor and transmission to be capable of driving the car at that rate. We should advise making the forward sprocket either 5 or 6 tooth and the rear sprocket 36 tooth, making a reduction of 6 to 1 in the latter case or 7.2 to 1 in the former. This would give the car a maximum speed of slightly over twenty miles per hour with the 6 to 1 gear and about eighteen miles an hour with the lower gear; the motor will probably not be capable of more.

ELIMINATING THE NECESSITY FOR POLISHING.

Editor THE AUTOMOBILE:

[1,408.]—Kindly advise me through "Letters Interesting and Instructive" if there is some substance known to coat brass on a car, so you won't have to polish it.

I have a 1908 four-cylinder Model 10 Buick. Would a magneto give satisfaction on such a car, do you think?

Gordon, Neb. L. H. JORDON.

An attractive green finish may be given the lamps by the use of a solution of acetate of copper, or carbonate of copper, or by using a mixture of the two, according to the tint desired. The chemicals, familiarly known as "verdigris," are mixed with a light varnish and applied with a brush. While still wet the high parts are wiped off with a rag dipped in the solvent of the varnish, which will probably be found to be alcohol. After the process of applying this color has been finished, it must be allowed to dry hard and then a coat or two of transparent lacquer is put on for protection. This will give a finish that does not require any polishing as long as it lasts, which will depend upon the amount of rubbing the lamp is given to remove mud, etc., as well as the weather. There are a great many variations of the process described, but none of them are absolutely permanent where subjected to the weather. To obtain a permanent finish for such conditions electro-plating is required.

LENGTHENED WHEELBASE IS AN IMPROVEMENT.

Editor THE AUTOMOBILE:

[1,409.]—In letter No. 1,383, a writer inquires about a Darracq car with a lengthened wheelbase. I have used a car of the same make and possibly the same model for three years. After getting thoroughly tired of using a car when the rear wheels carry the entire passenger load, I lengthened the body 10 inches, and the wheelbase 18 inches, and changed it to side entrance. It is not yet completed, but it is a sure improvement.

Wakefield, Mass. E. I. PURRINGTON.

As stated in the answer to the letter referred to above, the short wheelbase was one of the most radical defects in the designs of cars that appeared prior to 1904. The car with a very short wheelbase is almost unmanageable above a certain speed, and does not steer well at speeds as low as twenty-five miles an hour, while it has a most disconcerting habit of "spinning" around on the road when the brakes are applied suddenly while moving at a good rate of speed. The way some of the old cars would "cavort" under such circumstances, particularly if the road happened to be at all slippery, was enough to make the driver's and passengers' hair stand on end, and doubtless such conditions often led to the car's overturning. Apart from the extra comfort of the side entrance tonneau, lengthening the wheelbase is an improvement that is highly appreciated by anyone who has had experience in handling a short car.

SOME INTERESTING FIGURES FROM ABROAD.

Editor THE AUTOMOBILE:

[1,410.]—"Another Illusion Gone" is the heading of an article in a well-known motor trade paper, and refers to the fact that the French, the pioneers of the pleasure motor car, are, from a motor manufacturer's point of view, in a very bad way, with their exports rapidly declining, and their faults too long glossed over by their early reputation now exposed to public view, with the result that most French cars have fallen in reputation and orders.

The reasons for the collapse of French motor cars are various, but may be set under the following headings:

1. Lack of knowledge of foreign trade requirements, and inattention to customers' complaints and orders.

2. French manufacturers under-estimated the strength of the motor movement in countries other than France.

They believed themselves the leaders, whereas statistics recently published show that Great Britain has the greatest number of motor cars in use, viz., 79,000, Germany over 36,000, and France only

about 34,000; as a matter of fact, if the world was taken, I find France would only be fourth and not third, as America has certainly nearly as many in use as Great Britain, if not more, so that France, from being the pioneer in the manufacture and use of motor cars, has now fallen into the fourth position, and Great Britain as a user of motor cars has left France far behind.

The net result of this is that French manufacturers have much fewer orders than usual this year, and as far as I can find from inquiries there are only one or two French firms that have increased their British business at all, and probably the reason why one of them, namely, De Dions, has done so is because the manufacturers of the De Dion cars have had the advantage of an English company to advise them, and considering the multitude of their orders, British advice was apparently worth following. On the other hand we see some British firms, even in this year of financial crisis, increasing their business and actually selling more cars than ever before.

In powerful motor cars the British six-cylinder principle initiated by Mr. Napier shows a progress this year greater than ever before.

The number of six-cylinder cars sold since October 1, 1907, to April 20, 1908, being 37.6 per cent. greater than last year, and the orders still in hand to be executed within the next two or three months show 98.3 per cent. in advance of the same period last year.

The whole matter interests me greatly because at a dinner held on February 28, 1906, I set out clearly that the French motor car trade was on the decline; since then it has looked better than it really is, by reason of the imports to this country of French motor 'buses and motor cabs, but the next six months will see such a falling off as will once and for all establish the fact that British cars are best to sell to motor car users in this country.

London, Eng. S. F. EDGE.

While Mr. Edge's observations are doubtless the result of personal experience in sizing up the situation in the far-seeing manner for which he is noted and are of considerable interest as showing the view taken of the British market for Continental machines by one who should be in a pretty good position to know, his figures are rather misleading, at least where the number of cars in use on this side of the water are concerned. As an instance of this, it may be cited that the registration figures for the State of New York alone—but one of the almost fifty States in the Union—are now close to 53,000, and as these figures have advanced more than 20,000 in the past two years it is safe to say that 30,000 would be a conservative estimate of the number of cars in use in this State. Probably the figures published in *The Car* recently, in which the United States are credited with 130,000 cars in use, are more nearly correct and will be found to err in being too conservative if at all.

WHAT IS THE CAUSE OF THIS MYSTERY?

Editor THE AUTOMOBILE:

[1,411.]—Will you kindly suggest through "Letters Interesting and Instructive" the probable cause of the following trouble with my Maxwell two-cylinder touring car? Ignition good, batteries show 14 amperes, mixture seems good, engine starts on first compression and runs all right for about an hour, then seems to get pretty warm, but radiator water does not boil. Suddenly engine slows down and stops. Has to be cranked several times before it will start again, then goes on without further trouble. Always does this after being run about an hour. Carbureter thoroughly cleaned, also gasoline strained. Circulation pipes to radiator were found somewhat reduced by deposit, which probably caused heating, but why should engine stop from this cause? There is no seizure, as engine cranks readily.

Hendersonville, N. C. W. S. OSBORNE.

Just why the motor should stop at the end of an hour, or any other definite period, and then resume and run continuously thereafter without any trouble, is as much of a mystery to us as it is to you. A motor will frequently come to an unexpected stop after running a short time and cranking will immediately restart it, but this is often due to a temporary failure of the fuel supply that the short stop permits to right itself. Under the circumstances we would only be hazarding a guess at what the probable cause of your trouble may be and we think there are a great many of our subscribers who find themselves in a position to do something more definite than this, so we will put it to them to answer.

QUERIES ABOUT STEEL AND LUBRICATING OIL.

Editor THE AUTOMOBILE:

[1,412.]—What kind of steel should be used for the pin in a steering knuckle of the Elliott type? Does a colorless oil contain less to carbonize than a dark oil? A SUBSCRIBER.

Aurora, Neb.

The best steel procurable is none too good for any part of a steering gear. Better write the makers for a replacement part, rather than use ordinary material for making it, unless you have facilities not enjoyed by the average autoist, in which case it is advisable to employ either a good alloy steel, showing high tensile strength and yield point, or a good quality of low carbon steel, in case the alloy steel is not procurable. Tool steel should serve the purpose well. A colorless oil is said to possess this characteristic, but we have never had any personal experience of the kind.

REVERSING POLARITY OF A STORAGE BATTERY.

Editor THE AUTOMOBILE:

[1,413.]—What effect or damage would occur if in charging a 6 volt 60 ampere storage battery the wiring should be reversed, that is, the positive wire of the charging set be placed on the negative binding post of the battery and the negative wire of the charging set to the positive binding post of the battery? If any damage should result, how would you remedy it? J. S. KARNEY.

Clinton, Ind.

The formation of the plates would be changed from one chemical composition to another by the charge, and usually the battery would be ruined. We think the most advisable thing for the average autoist to do would be to return the cells to the maker with a statement of what has been done. At least, it is our opinion that this would be the most economical and effective way of remedying the trouble.

ABOUT THE ONE-CAR 24-HOUR RECORD.

Editor THE AUTOMOBILE:

[1,414.]—Please inform me what the world's record for 24 hours' continuous running on a one-mile track by one car is. I have seen two claims, the National, 1,094 3-16 miles, and the Renault, 1,079 miles. Did Edge use more than one Napier in his 1,581-mile record on Brooklands? INQUISITIVE.

Milwaukee, Wis.

We believe that the record of the National still holds good for a 24-hour event on a one-mile track, using the same car driven by one man. Edge only used one car in making his record at Brooklands, but two or three other cars of the same make raced with him for the entire period.

ANOTHER GOOD WAY TO PREVENT TAMPERING.

Editor THE AUTOMOBILE:

[1,415.]—In a recent issue of your paper, I noted an article regarding the locking of a car by locking the clutch-pedal in such a position as to disengage the clutch. I find the following a very effective way of preventing my 1907 Stoddard-Dayton being used without my permission. I cut an electric snap-switch in on the ground wire to the commutator and fasten the switch to the dashboard under the hood. Then by simply turning off the switch, putting down the hood, and fastening it, and locking a padlock through the fasteners, one on each side, the car is effectually locked, and yet it can be moved around the garage, as is sometimes necessary. My car was used for an all-night "joy ride" last summer while I was stopping in your city. Hence the above scheme to prevent a repetition. C. A. COCHRAN.

Youngstown, O.

ABRASIVES ARE VERY DIFFICULT TO REMOVE.

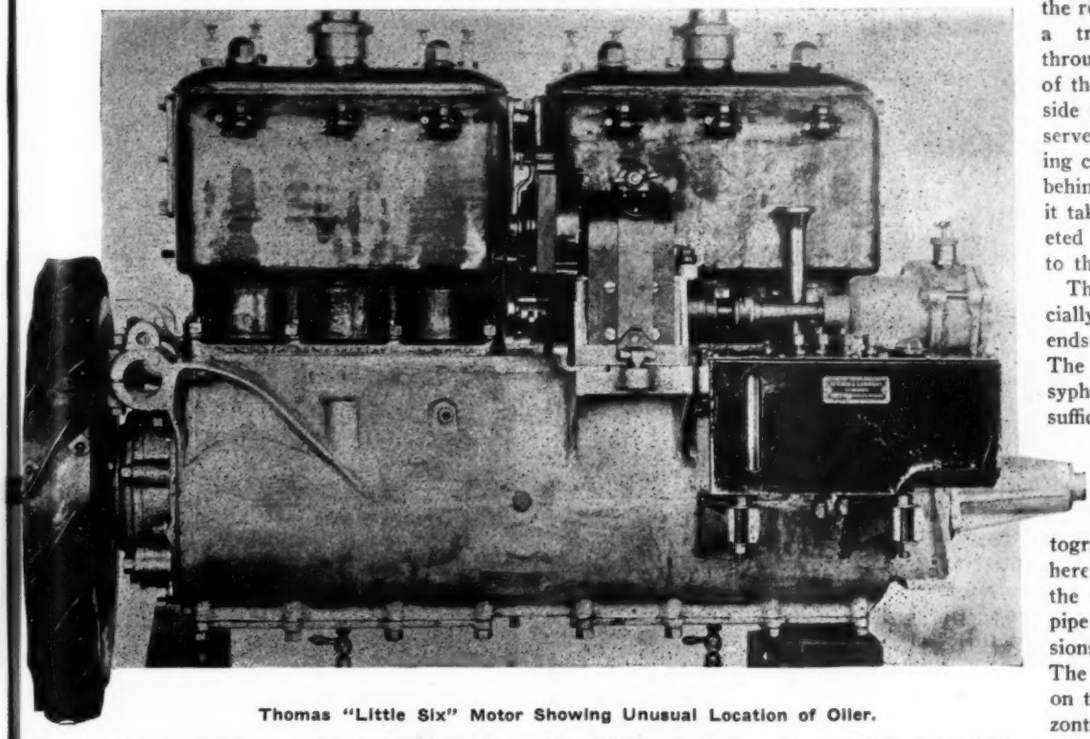
Editor THE AUTOMOBILE:

[1,416.]—Referring to letter No. 1,387 by E. Sparenberg, would like to say that I can see ruin ahead for V. R. Lane's motor if he adopts the practice of introducing emery in any form into his cylinders. I also much doubt the ability of any man to grind cylinders as proposed and get them round and true. I would advise Mr. Lane to send his cylinders to a cylinder-grinding machine regardless of the expense, as he would then have something he would enjoy. As it is almost an utter impossibility to completely clean out a cylinder of emery flour or dust, he will find that the grinding will continue long after he puts the motor to work. W. J. B. S.

Providence, R. I.

THOMAS '09 "LITTLE SIX" HAS GOOD FEATURES

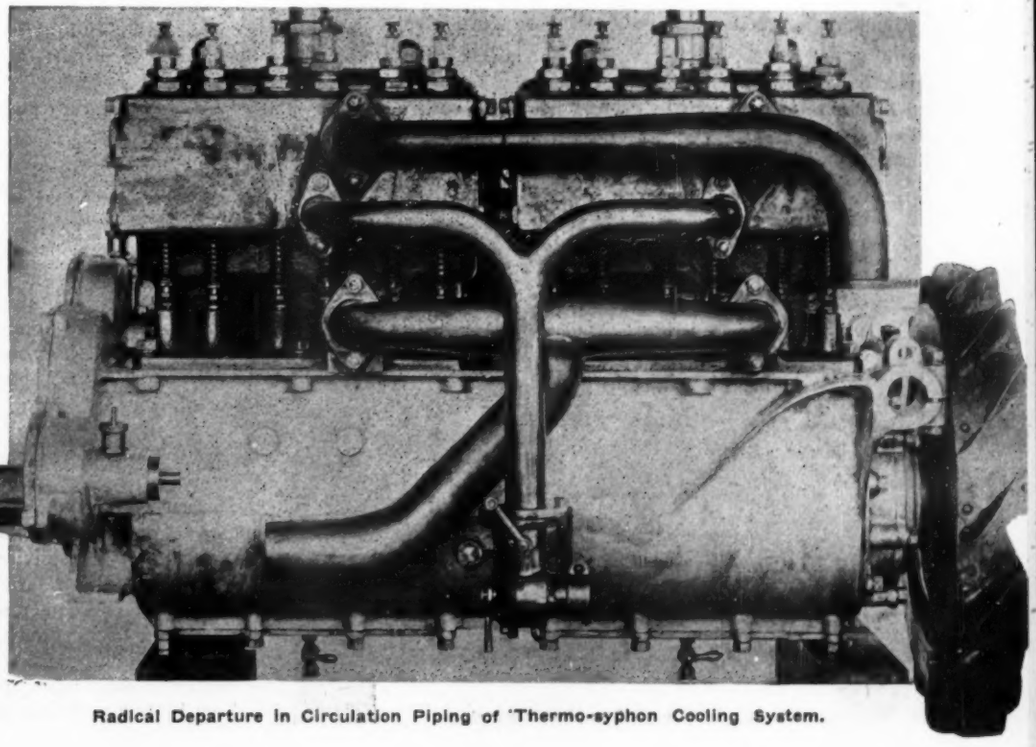
DEVELOPMENTS of an unusual nature have been confidently looked forward to in the policies of many of the large makers for 1909, but it was hardly thought that they would materialize so soon, or that they would be of such a revolutionary nature as the announcement of the Chalmers New Detroit four-cylinder car to sell at $1,500, and the Thomas "Little Six" for 1909, listing at $2.500. These figures alone fail to convey the impression that is made when the technical details of the car are reviewed, for then it is realized for the first time that these offerings are not merely repetitions of attempts that have gone before to produce a cheap car, but are the successful culmination of long study in the problem of producing a high-grade car to sell at a low price.



Thomas "Little Six" Motor Showing Unusual Location of Oiler.

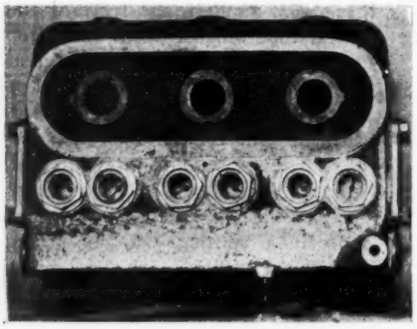
This will be at once apparent from a description of the features of the motor. The cylinders are cast in triple block with detachable water-jacket heads and end plates. Both the inlet and exhaust ports give into common passages, so that only double branch pipes are necessary from the carbureter and exhaust outlet. All the valves are on one side of the engine, and the valve lifters are made with flat ends, which bear against the cams in place of having roller contacts, as is usual. Both camshaft and crankshaft are supported on annular ball-bearings of a positively separated type. The crankcase is a tubular construction and is not made in the conventional upper and lower halves—with end plates for taking the end bearings of the crankshaft and camshaft. It is carried on a three-point support, the forward end of the crankcase having a central foot which reposes on a drop cross member of the frame, whereas the rear of the engine is supported on a transverse tube which passes through split eye-holes on the rear of the crankcase and is supported on side frame members. This tube also serves as an attachment for the steering column housing. No fan is used behind the radiator, substitution for it taking the form of fan-blades riveted to a sheet metal band attached to the periphery of the flywheel.

The connecting rods are of especially light pattern, and have the big ends lined with Parson's white brass. The water circulation is by thermo-syphon, and, in order to provide for sufficient circulation, the pipes which conduct the water to and from the radiator are of exceptionally large section. This can be seen by inspection of the photographs of the engine, reproduced herewith, an interesting feature being the attachment of the lower water pipe to pockets which form extensions from the cylinder jacket walls. The radiator is similar to that used on the Thomas-Detroit, having horizontal cooling vanes closely spaced. A very interesting feature of the cooling system is the means whereby its water capacity is increased to the limit demanded by the use of the thermo-syphon circulation system in vogue.



Radical Departure in Circulation Piping of Thermo-syphon Cooling System.

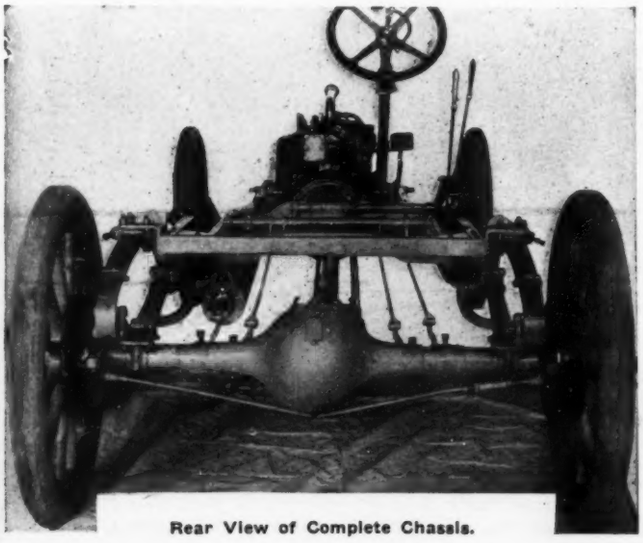
Double ignition is provided, the distributor being located on the carbureter side of the engine, while the high tension magneto, by Bosch, secured in place by an encircling metal strap, driven through the medium of an Oldham coupling, is upon the right-hand side of the motor. The lubricator, which is a force feed of McCord pattern, is located on a level with the magneto base, also on the right-hand side of the engine, and is driven positively through the means of a pair of spiral gears. Sight feeds are located on the dash so that the lubrication can be constantly watched by the driver. The lubricator can be removed easily by an ingenious way of slotting the lugs which support it. Three point support for the engine is utilized, the rear end of the motor being carried from a cross tube support by brackets bolted into the side rails of the frame while the front end of the motor rests upon the drop bar, forming the front cross member of the frame. An unusual refinement is the carrying of the starting crank and its disengaging mechanism integral with the crankcase. The high tension leads from the distributor and magneto, are neatly cased in housings supported by small brackets located on the water jacket covers. These housings are so arranged that only the smallest possible amount of wire is exposed between the housing and the plugs, this making both for neatness and electrical efficiency.



Plan View of Three-cylinder Casting.

A steel band having helical blades riveted to it, encircles the flywheel, and this insures a very efficient fan action without decreasing the strength of the flywheel. The clutch is of the three disc pattern used on all previous Thomas models, though it has been somewhat lightened and refined to suit this new model.

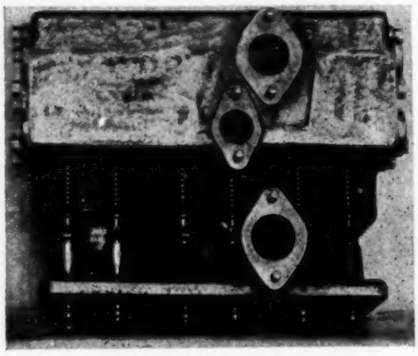
Directly behind the clutch is a well designed universal joint, this joint being the only one used in the transmission system, while back of this joint is the clutch collar, mounted with a ball thrust bearing. The clutchbrake pedals and the selective portion of the gear-striking mechanism is all carried in brackets mounted on the central cross member of the frame, the propeller shaft housing also being suspended from this same cross member. The transmission is grouped about the rear axle, is of the selective type, and gives three speeds forward and reverse. The transmission and rear axle form a neat unit. The shafts are carried on annular ball bearings, the gears being made from a special heat-treated nickel steel. A single universal joint is used, that forward of the clutch collar, but the construction is such that the propeller shaft is exceptionally long, providing for ample road clearance and a small transmission deflection. The housing of the propeller shaft is utilized to transmit both driving effort and torque.



Rear View of Complete Chassis.

The frame, which is of the single drop pattern, is suspended on long semi-elliptical springs at the front end and full elliptical with double scrolls at the rear. This gives an easy action with very little recoil. All the brake connections lie within the lines of the frame, so that the utmost cleanliness in contour is secured for the outline of the completed car, together with exceptional ease of keeping the machine clean in bad weather.

The control is entirely standard. The change speed and brake levers are in the usual position, but particular pains have been taken to locate them with regard to the steering wheel, the pedals and the driver's seat, so as to secure the maximum of comfort. An unusual feature of the car is the fact that it is mounted on 36-inch wheels, 3 1-2-inch tires being provided for both front and rear wheels. In the body work the straight-line effect is carried all through.



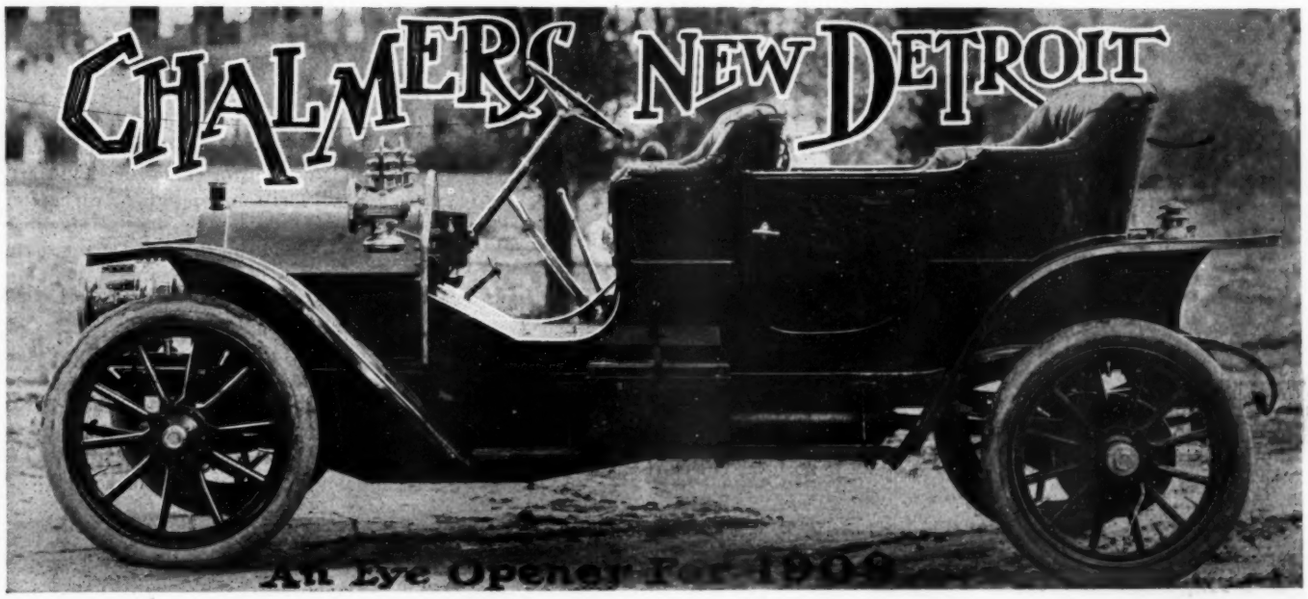
Valve Side of a Cylinder Casting.

Especially happy has been the proportioning of the body dimensions and the location of the driver's seat in regard to the control levers, the steering wheel and the pedal position. Luxury is provided by the use of very deep cushions and ample room in the passenger accommodation. The first aim of the Thomas designers has very evidently been to secure a combination of grace with comfort, for particular attention has been paid to the spring suspension. The wheelbase is 122 inches, sufficiently long to permit both the adherence to accepted lines and the provisions of well-balanced body work, and the engine—30-horsepower—should be ample to handle the car, primarily designed for comfort and general use, with ease under all conditions.

PANHARD EXPERIMENTS WITH NOVEL DEVICE.

Daily newspaper reports to the effect that the Panhard & Levassor Company has succeeded in perfecting a simple device to eliminate the change-speed gear box have been given considerable publicity within the past few days, but the statement of the case given by the New York representative of the company does not put as roseate a hue on the report as the dailies have given it. When appealed to for information Mr. Massenet said:

"As you are probably aware, the Panhard company is always on the lookout for improvement and is willing to try anything that appear to have sufficient merit, with a view to acquiring the patent should the claims prove sound. Whether this is some outside patent, or something developed in the shop, I do not know, but my latest advices inform me that some experimenting has been done with a device of this kind and the experiments are still going on. Whether the device will ultimately be applied to stock cars, I do not know, but if so it will probably only be to cars of very low power, if at all. Too much credence must not be placed in daily newspaper reports of such things, as they are written by non-technical men.



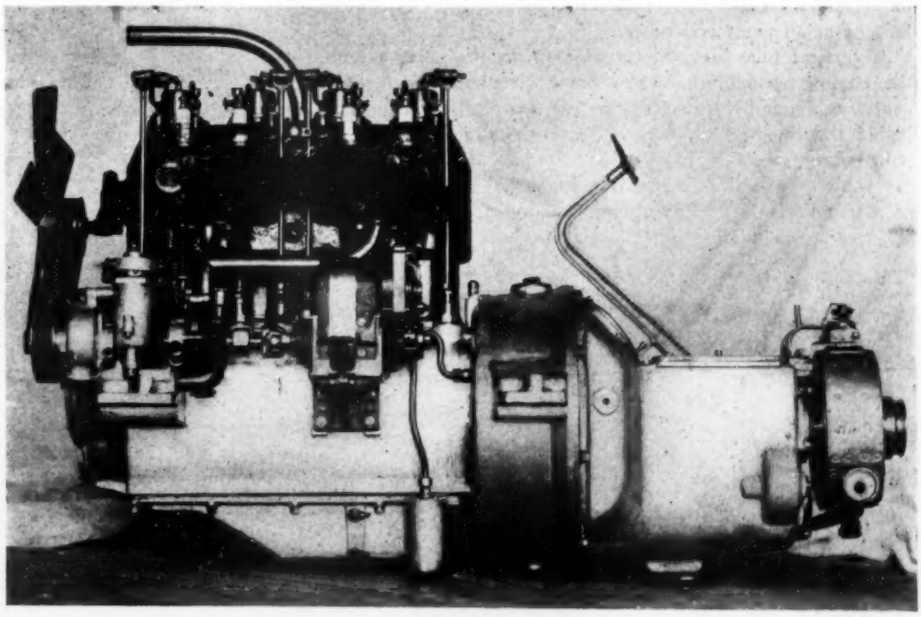
IF such a car as the Chalmers New Detroit, which is to be one of the E. R. Thomas Detroit Company's offerings for 1909, had been placed on the market three years ago, it would have been shunned by the novice and the experienced alike, and there would have been much head-shaking as to what it was built of to sell at the phenomenal price which its makers have put on this most attractive looking 24-horsepower, four-cylinder car, namely $1,500. But under present conditions the latter is merely another striking indication of what a modern factory and purchasing organization can do with a good design to work on. It is likewise a sign of the fact that American makers are finally beginning to realize in no uncertain manner just where the popular demand is trending. There has been entirely too great a gap between the actually low-priced car with its numerous limitations of heavy weight and low power, and the medium-priced car with sufficient power and style about it to satisfy the man who realizes only too well what he wants in the shape of an automobile, but to whom the really good car has been an impossibility heretofore.

The Chalmers New Detroit strikes at a point between these two, where it is going to make its influence felt in no uncertain manner. As its makers state, it is a car in a class entirely apart from any of the low-priced machines hitherto placed on the American market, its designer, H. E. Coffin, having embodied in it features only to be found on machines, of either American or foreign origin, at many times its price. Some of these, briefly summed up, are the unit power-plant with its one-piece casting, multiple-disc clutch, selective type of sliding gear giving three forward speeds, full-floating type of rear axle, ball bearings throughout the car, and a number of others, which are mentioned further on.

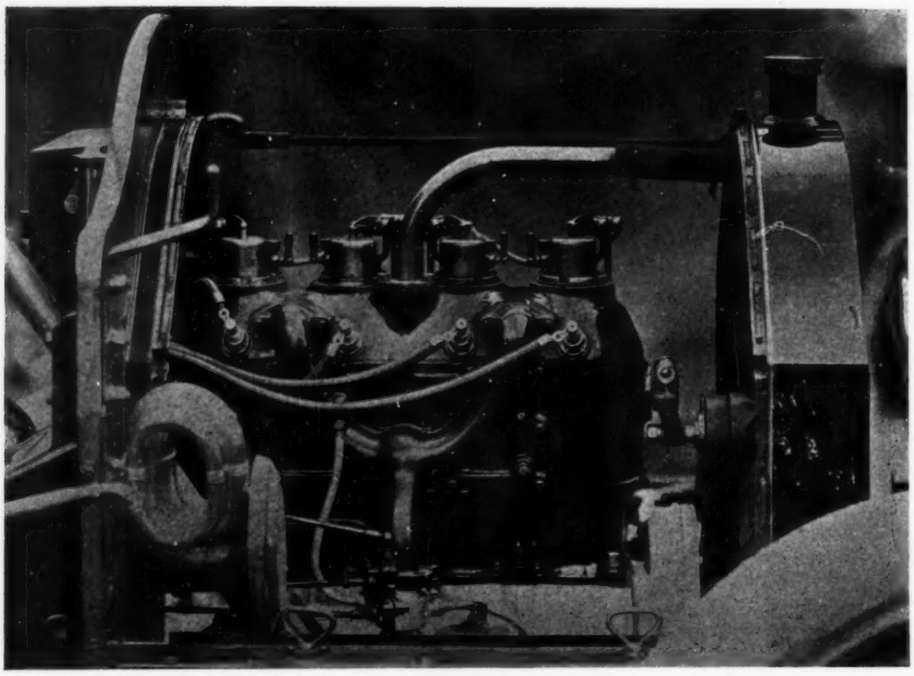
Doubtless the feature that will earn the greatest commendation for the designer of the car is its extremely compact and well thought out unit power-plant. The four-cylinder, 24-horsepower motor, clutch and change speed gear-set are all inclosed in a single aluminum casing, which is constantly flooded with oil. The gear-set case and clutch are attached directly to the flywheel casing and do not depend for their alignment on any part attached to the frame of the car, thus not only eliminating entirely the numerous troubles due to lack of alignment, but also providing the most effective protection possible for these essentials. The entire power-plant may be removed as it stands simply by taking out but six bolts.

The most striking feature to be found on a car that is being offered at such a price is the use of annular ball bearings of liberal size throughout. These are of the nonadjustable type, and are in every way duplicates of those being used on cars selling for many times as much. Even the crankshaft, which is unusually short and strong, owing to the one-piece cylinder casting, is carried on annular ball bearings—a construction only to be found in the highest-priced cars. The connecting-rod bearings are of die-cast tin babbitt, and have been designed with an exceptionally liberal amount of bearing surface.

There are numerous points of merit about the motor itself which will immediately attract the attention of the experienced eye. Lightness and compactness have been gained to an unusual extent by combining the four cylinders in a single casting, while



Compact Unit Power Plant and Gear-set of Chalmers New Detroit.



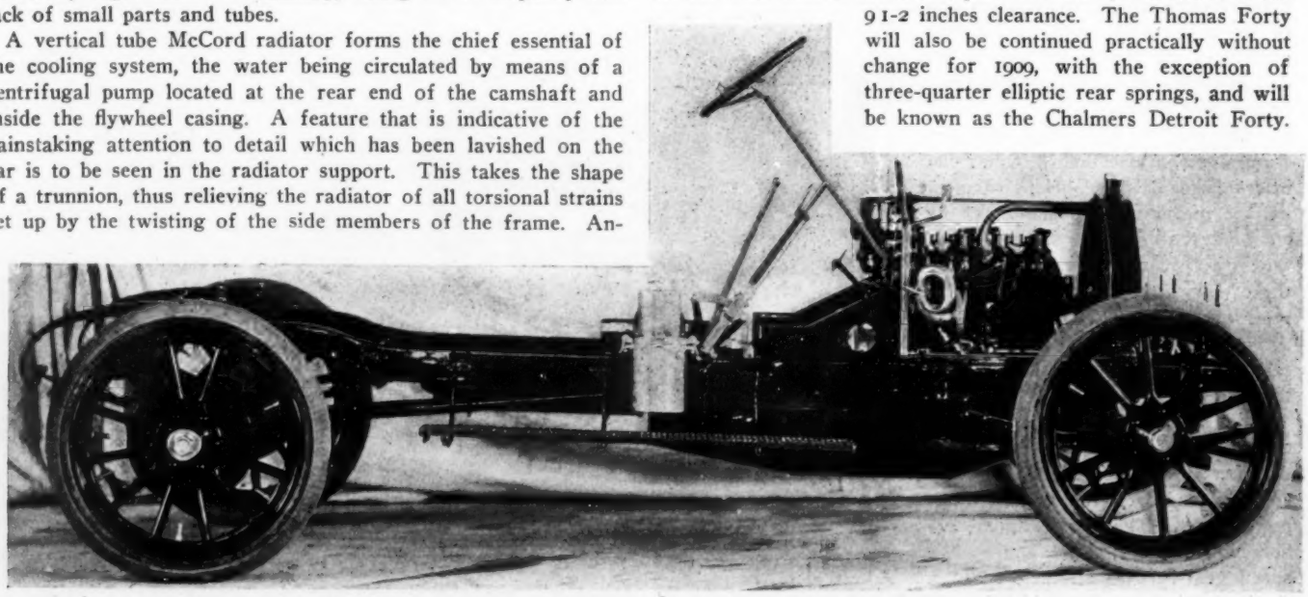
Carbureter Side Illustrating Neatness of One-piece Casting.

it also gives the further advantage of more satisfactory water-jacketing. The intake valves are placed in the head of the cylinder, and the exhaust valves are at the side, this arrangement making it possible to use very large valves, considering the bore of the cylinder. The intake valves are operated by overhead rocker arms, and measure 2 1-4 inches in diameter, while the exhaust measures 1 1-2 inches, and its operation is by means of the usual direct thrust method. Simplicity has been attained by employing the constant level splash oiling system originated by Mr. Coffin, fresh oil being continually supplied to the engine by a gear-driven pump, drawing oil from a reservoir at the bottom of the crankcase. Individual compartments are provided for each crank throw, and partitions have been placed in the crankcase, thus preserving the oil level throughout the crankcase regardless of the grade on which the car is traveling. With this system, a single filling of the reservoir is ample for a 500-mile run, while it requires very little attention and has an extremely high factor of reliability, owing to its simplicity and lack of small parts and tubes.

A vertical tube McCord radiator forms the chief essential of the cooling system, the water being circulated by means of a centrifugal pump located at the rear end of the camshaft and inside the flywheel casing. A feature that is indicative of the painstaking attention to detail which has been lavished on the car is to be seen in the radiator support. This takes the shape of a trunnion, thus relieving the radiator of all torsional strains set up by the twisting of the side members of the frame. Another feature that must be put down as an eye-opener, when the price of the car is considered, is the provision of a dual system of high-tension ignition, employing a Bosch magneto for the running side, and a coil and accumulator unit for emergency and starting. The same design of carbureter is employed as has become familiar on the Thomas Forty in the past, while an improvement has been introduced in the design of the gas-intake. Instead of the usual pipe leading from the carbureter, passages have been cast in the water-jacket cover of the cylinders, the charge thus flowing through a water-jacket passage on its course to the intake valves, thus avoiding condensation in cold weather.

The use of a selective type of sliding change speed-gear is another distinctive feature worthy of note. The gears slide upon a round shaft with four keys set at equal distances round it, engaging in corresponding keyways on the gears. All shafts and pinions are thoroughly heat-treated. The propeller shaft is of heat-treated nickel steel, and runs through a longe sleeve attached rigidly to the differential housing of the rear axle. This sleeve is fitted with annular ball bearings at its forward end, and takes both the driving and braking strain. It does away with the usual torsion rod and insures proper alignment of the rear axle at all times. A single universal is used just behind the gear-set. The rear axle driving unit is of the full-floating type, the entire weight of the car being carried upon the heavy axle tube. The live axles and gears are 3 1-2 per cent. nickel steel, heat-treated.

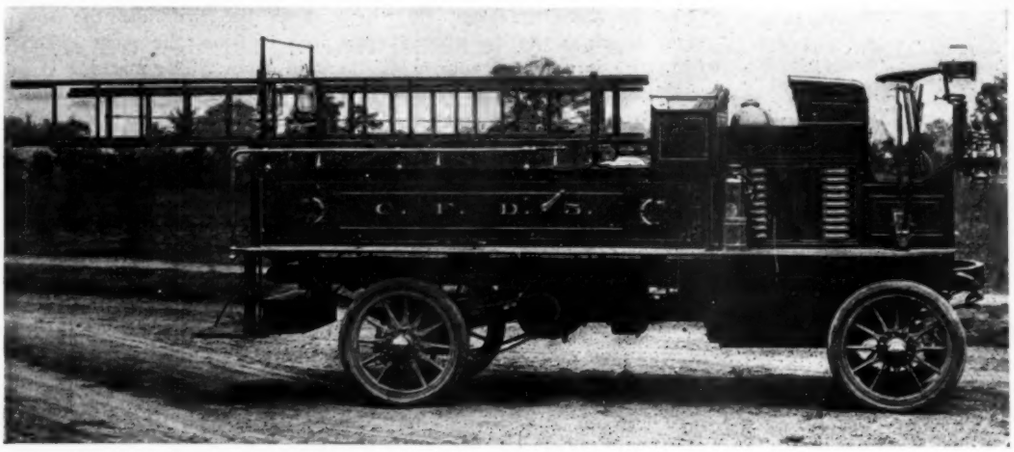
The suspension consists of semi-ellpitic springs forward and three-quarter elliptics in the rear, the spring seats being swiveled spherically upon the axle tubing, thus preventing twisting of the spring under unusual shocks. Ball bearings are used throughout the differential and in the rear wheels. The front axle is a single piece drop-forging of new design I-beam section, the spring seats being forged integral with the axle. The center of the front axle is the lowest part of the car, and allows a full 9 1-2 inches clearance. The Thomas Forty will also be continued practically without change for 1909, with the exception of three-quarter elliptic rear springs, and will be known as the Chalmers Detroit Forty.



Side View Complete Chassis Which Gives an Idea of Small Space Occupied by Power Plant.

AUTOMOBILE FIRE FIGHTERS FOR EAST AND WEST

ALL that is modern and progressive is usually ascribed to the large cities, and the rural visitor is usually shown the sights and wonders with great pride by his city cousin, but since the advent of the automobile fire engine, many small towns are taking the lead of their larger brothers by going ahead in this direction and installing apparatus for fire protection that is far more modern than that to be found in many a large city. An instance



Knox Air-cooled 40-Horsepower Fire Fighter for Chicopee, Mass.

of this is to be found in the case of Chicopee, Mass., which has just received a new Knox fire fighting truck. This car is the product of the Knox Automobile Company, Springfield, Mass., and is said to be the first of its kind to be turned out in this country. It is equipped with a 40-horsepower air-cooled Knox motor of standard construction and has been designed especially for the use of country towns. It is for the Williamsett fire department, which is what is known as a "call department," having to cover the neighboring hamlets of Aldenville and Fairview.

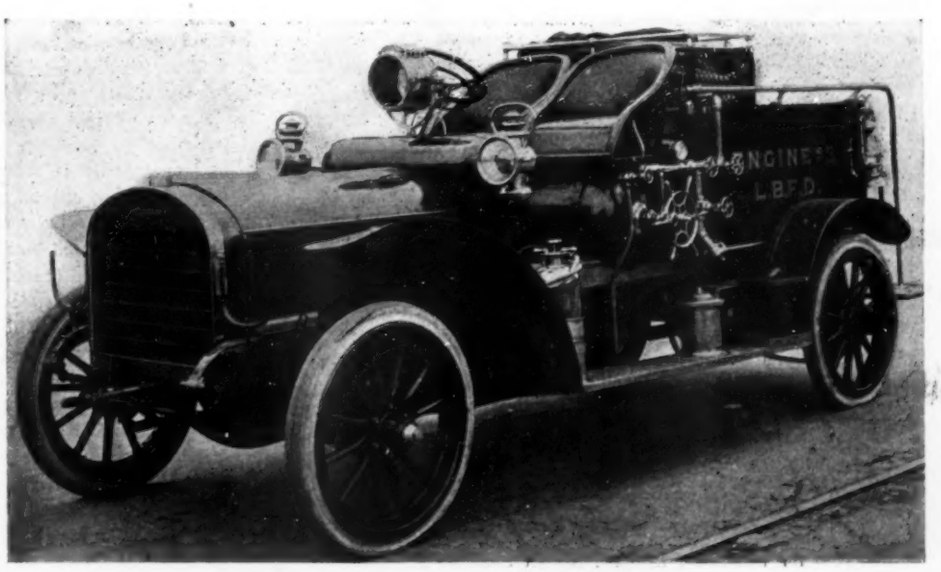
Its construction where the chassis is concerned follows the lines of the Knox products more or less closely throughout, a sliding change-speed gear of the selective type providing three forward speeds and reverse constituting this step between the motor and the rear wheels, the final drive being by a countershaft and double side chains, the rear axle being a one-piece two-inch section of steel. The transmission and wheels are equipped throughout with Timken roller-bearings of liberal size for the load to be carried. Unusually powerful brakes are provided, the running brake, which is pedal operated, acting on the ends of the countershaft, while the emergency operated in the usual manner by side lever acts on drums attached to the rear wheels. The tire equipment consists of solids, measuring 34 by 4 inches, front and rear. In addition to the usual outfit of oil side and tail lamps, a 10-inch Rushmore searchlight supplied by a Prest-O-Lite tank is provided and wired so that it may be electrically lighted by a push button at the driver's seat. The car is geared to have a maximum speed of 20 miles an hour and will ascend grades of varying heights at from 5 to 15 miles an hour. The fire fighting equipment consists of two chemical engines of the Halloway type, 300 feet of chemical hose, 1,000 feet of standard water hose, water-play nozzles, hand extinguishers, lanterns, pikes, hooks, crowbars, axes, door openers, ladders and the like, thus giving it a most complete outfit.

New Rambler Fire Fighter for California.

One of the first fighting machines to travel under its own power that has been seen in the far West has just been built by the makers of the Rambler and was designed by F. S. Craig, chairman of the board of public works at Long Beach, Cal. Before deciding to adopt the automobile type of fire fighting engine, the authorities undertook numerous and exhaustive tests to determine the relative merits of horse-drawn and gasoline-driven machines, and a great many various kinds of apparatus of both types were put through their paces at great length before any decision was reached, so that Thomas B. Jeffery & Company may well consider the selection of the product of their Kenosha plant a well won victory over a number of competitors.

The motor is of the four-cylinder vertical type, the wheel base is 120 inches, the regular 1908 Rambler tire equipment is used, while the car is guaranteed to operate under a weight of 3,000 pounds at a speed of at least 35 miles an hour. The rear portion of the car is used to carry 250 feet of hose, the chemical tanks being double 80-gallon receptacles under the seats.

A special starting device has been provided in the form of an inclined platform so that when the alarm is received the platform is tipped and the car glides out of the station without one second's delay. By keeping the gear-changing lever in the high-gear position the motor is thus started automatically without the necessity of delaying to crank it, and much valuable time is saved in getting under way, actual tests extending over a period of time demonstrating the fact that the power-driven apparatus could reach the fire in a fraction of the usual time.



Rambler That Will Take Care of Fires in the Town of Long Beach, Cal.

A FEW OF THE NEW EUROPEAN NOVELTIES

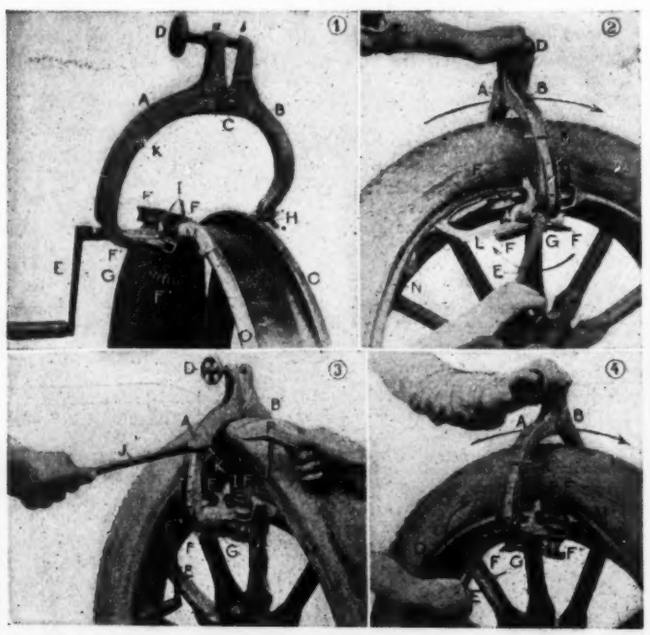
THE usual method of repair when a tire casing bursts and a new one is not available is to temporarily lace a gaiter round the defective spot and put in a new air chamber. The method is recognized as being defective, for the air chamber under pressure enters into the opening made and by reason of its

Frenchman Invents a "Corset" for Tire Repairing.

deformation and friction has a tendency to burst. A temporary repair produced by M. Eyquem consists in placing a rubber sleeve around the air chamber instead of the casing, and attaching by means of pressure buttons. One portion of the sleeve or corset, as the inventor has termed it, is faced with leather and it is this strengthened part which must be placed opposite the hole. If the blowout is of a serious nature, the hole in the casing might be stuffed and the ordinary sleeve placed over the tire in addition. This is not usually necessary, however, for ordinary road conditions.

To Facilitate Changing Heavy Clincher Tires.

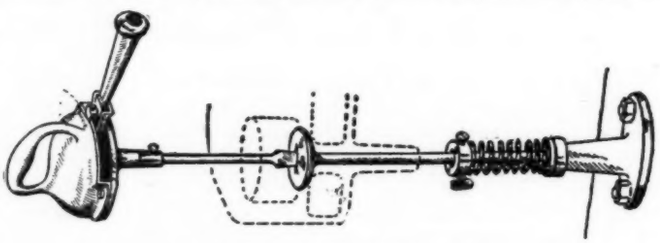
Until dismountable and quick-change rims have come into general use there will always be room for improved tools for the fitting of the larger sizes of pneumatic tires. One of the most popular of these on the European market is known as the Archimede and consists, as shown in the illustration produced from *Omnia*, of a couple of pivoted arms *A* and *B*, the former carrying at its base a mechanism operated by a handle. The pulley at the base of the arm *B* is free to turn in any direction; the two pulleys *F F* are geared and obtain their movement from the rotation of the arm *E*. By means of the screw *D* at the head of the apparatus the three pulleys are made to bear on the face of the rim. As will be readily seen, the operation of the arm *E* would result in the entire apparatus revolving around the rim. But the operator holds the machine by placing his hand on the upper portion and it is the rim which is caused to revolve as the handle is turned. By reason of the forward finger *M*, which raises the tire, and the spool *L* which pushes it completely into position, the most difficult tire is mounted with a minimum of labor. The machine is of special value in garages and for use on dismountable rims which, by reason of their being detached, are often difficult to handle. Anyone who has labored and perspired over the task of forcing an obstinate five-inch clincher onto its rim on a warm summer's day when the mercury had climbed way up and the humidity was in proportion would appreciate what a convenience such a device would be under the circumstances.



Tool for Replacing Large Tires on Clincher Rims.

Convenient Aid for the Process of Valve Grinding.

The operation of the new valve grinding tool will be readily understood by reference to the accompanying illustration. A steel cut gear wheel at the top of the sleeve accommodating the shank and in mesh with a toothed quadrant allows of a movement of about two-thirds of a circle. To prevent scoring a



Strangely Familiar "Foreign" Valve Grinding Tool.

helical spring is supplied with each instrument to be fixed at the foot of the valve stem, so that as soon as pressure is removed from the head the valve lifts and the position of the particles of emery is changed.

A Tire Maker's Advice About Loading.

It is not sufficiently realized by automobile purchasers that the manner of suspension of a car and especially the position of the rear axle have an enormous influence on the life of tires, declares the head of one of the largest tire factories in the world. A well suspended rear axle is an important factor in tire economy. Cars with short, harsh rear springs or overhanging bodies are ruinous to tires, the amount of work which the bandages are called upon to perform, especially if a closed body is carried, being enormous. It would be possible to mention many cars which, while not special offenders in the matter of weight, are tire devourers merely by reason of the position and suspension of the rear axle. Total weight is not all that should be considered in buying a car, automobiles that are equal in this respect showing enormous differences in their tire bills. While it is not possible to carry the full load between the axles, overhanging weight should be avoided as much as possible if tire economy is any consideration. This applies particularly to the closed car, and as this type represents a very substantial proportion of the total number of cars in use nowadays, it is easy to appreciate that disregard of it means a very large increase in the aggregate tire bill, though it is often so great even in the case of the individual that it is not necessary to refer to it *en masse* to make it appear imposing. Keep the weight as much between the axles as possible, and likewise keep it as low as possible.

ITALY'S AUTO FACTORIES USE AMERICAN MACHINERY

AN interesting report has been filed with the State Department by Special Agent Capt. G. L. Carden, in which he describes two Italian establishments manufacturing automobiles and in each of which American tools are used.

The shop equipment of the Zust works at Milan is of a high order. About 70 per cent. of the tools installed are of American make. From Robert Zust Captain Carden learned that the necessary parts in stock at that time admitted of the assembling of about 200 machines. This firm makes only 50-horsepower engines, and every engine is carefully tested in the laboratory shop before being issued. The work required on these engines is of a very careful and painstaking sort, and it is evident at the Zust shops that a great amount of attention is paid to detail.

Decreasing Number of Italian Motor Works.

The Zust shops in Milan are devoted only to automobile construction, and are independent of the machine-tool house of the same name at Lake Maggiore. The ownership, however, is the same. The Zust shops seem to have weathered the recent depression in the automobile business and may be expected to continue work. Of the 50 automobile concerns which sprang into existence in Italy during the past three years not more than ten or twelve will probably survive, and in some quarters it is doubted if at the end of the year there will be more than six or seven Italian automobile firms in the field.

Many tools at the Zust shops were found idle and covered up, while there appeared to be many new shipments on the floors still unopened. A little over a year ago at this time automobile makers were willing to pay high rates of advance for immediate delivery of tools. Among the American machine tools found in the Zust shops were observed standard-type machines from Brown & Sharpe, Hendey-Norton, Becker-Brainard, Cincinnati Milling Machine Tool Company, and Jones & Lamson.

Isotta-Fraschini Works Have Largely American Tools.

The Isotta-Fraschini automobile works in Milan are working at present about 700 men. The installation of machine tools is one of the best I have seen in Europe. It may be estimated roughly that there are 400 machine tools in service on the floors, and that at least 70 per cent. are American. It was indicated that the great majority of these tools were purchased during the past two years. The plant is at present working about 50 per cent. as many men as during the recent busiest time. The following makes of American machine tools are installed here: Brown & Sharpe, millers and grinders; Potter & Johnson, automatic turret lathes; machines from the Gridley Automatic and Windsor Machine Tool Company; Lodge & Shipley, and Lucas Machine Tool Company, engine lathes; Cincinnati Milling Machine Tool Company and Becker-Brainard Company, millers; Warner & Swasey, hexagonal turret lathes; Baush Machine Tool Company, boring mills; Cincinnati Shaper Company, shapers; Gleason Company, gear cutters; Pratt & Whitney, lathes; Cincinnati Machine Tool Company, drill presses; Bickford Drill and Tool Company, drills; Landis Machine Tool Company and Norton Grinding Company, grinders; Baker Brothers and Hendey-Norton Company, shapers; Acme Machine Tool Company, automatice screw machines.

Labor—Modern Equipment—Lack of Information.

The Isotta-Fraschini works are paying machinists between 45 and 50 centimes (100 centimes = 1 franc = 19.3 cents) per hour on a ten hours per day basis. An operator working at a Herbert lathe when questioned in my presence as to his pay exhibited a ring job on which he was engaged, and said he is able to finish about 15 of these rings per day. For each ring he received 45 centimes, which would mean 6.75 francs for a day's work. This rate of pay from an American viewpoint is extremely low. The work was well finished, but the speed was very much below what is seen in American shops. One of the officials of the establishment informed me that his chauffeur, who worked hard at the shops during the day, was able to satisfy himself on a dinner in the near-by restaurant costing 60 centimes. This included no meat except, perhaps, a small quantity of sausage. Many of the Isotta-Fraschini workmen, it was said, did not know the taste of a beefsteak, and yet there is a fine organization at this establishment. The work is carefully done, the attention to detail is painstaking and with the magnificent equipment possessed this plant only needs speed to earn a high percentage of efficiency. About 75 per cent. of the Isotta-Fraschini outputs are for export, and it was stated that the falling off of orders from the United States during the past year had been felt by this firm.

The present Isotta-Fraschini shops are modern throughout. They were put up in 1905, and practically all the tools now in service were purchased subsequent to the opening of the new shops. All tools installed in this plant are arranged in parks and fenced off, the millers in one group, the lathes in another, the boring machines by themselves, the automatics together, and so on. The statement was made by an official that when a new tool is received from America about all the information they had was what could be gleaned from a printed description in English, and that the shop expressions puzzled them in translating.

The Isotta-Fraschini works are one of the few firms which have weathered the recent automobile depression in Italy. This establishment is at present well stocked up with machine tools, but should conditions improve, as every indication points, it will not be long before this firm will require additional machines, and especially so if any enlargements are made of the present shops. This establishment is turning out engines ranging up to 65 horsepower, and for racing machines to still higher powers.

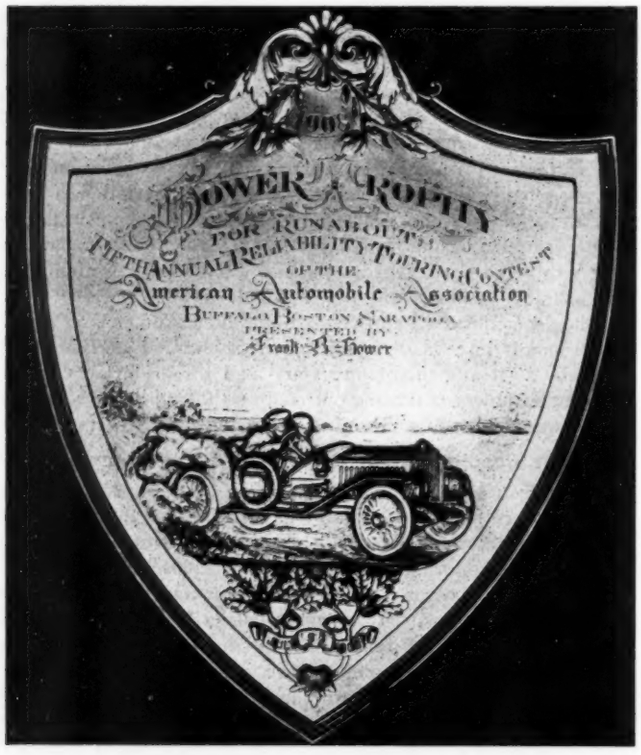
Present Conditions Satisfactory—Future Encouraging.

The industrial conditions in northern Italy at this writing (April 27) are good. Last year was the best year in the present decade, and the first quarter of the present is as good as the average showing for the year succeeding. This latter statement is based on the quarterly balance sheets required of all firms on the last day of March. My attention was called to the foregoing by Doctor Pirelli, of Pirelli & Co., Milan, which firm is working, 5,300 men. Their outputs are confined to electric submarine cables, land cables, and much of the rubber equipment utilized in automobile construction. The last-mentioned branch of the business has brought this firm in close touch with the automobile industry in Italy, and has placed the representatives of the firm in an excellent position to sum up the present situation. It is Doctor Pirelli's opinion that the automobile business in Italy will be in better condition by reason of the recent depression than otherwise. At first buyers of automobile stock could only see enormous dividends, but no account was taken of the cost of advertising, the cost of races, and other expedients resorted to to push sales, all of which expenses increased enormously as new firms came into the market.

At least 52 Italian automobile manufacturing firms were organized during the past two years, and of this number about 28 were established in Turin. The small firms have now been crowded back, and in many cases the small shops will take up new lines of industry. This they will be enabled to do by reason of the excellent equipment they possess. Large firms like Isotta-Fraschini and Fabbrica-Italiana-Automobil-Torino will continue to hold the field. These firms are at present working at a rate equal to about 50 per cent. and 65 per cent., respectively, of the rate demanded by last year's orders, and though the business is relatively quiet at their shops these larger firms are managing to hold their organizations together, and will be in position to take advantage of returning busy times.

CONDITIONS FOR HOWER TROPHY.

Judging from the number who have stated their intention of entering runabouts to compete for the Hower trophy, the contest for which is held in connection with the annual reliability tour of the American Automobile Association, it looks as if there would be twice as many entrants this year as last. The Hower Trophy will be competed for under the same rules as the Glidden Trophy, a point system of scoring being employed, thus necessitating the presence of an observer on each competing car. The runabouts as a whole will be divided into two classes, to be known as Class A and Class B, the former comprising cars listing at less than $1,500, and the latter cars listing at more than $1,500. When the day's schedule is less than 7 1-2 hours, Class B will be allowed 10 minutes more in which to finish than Class A, and when the day's schedule is more than 7 1-2 hours, Class B runabouts will be allowed 15 minutes more. In the event of there being a tie between two or more of the competitors at the end of the tour there will be no lengthy run required to settle



Hower Trophy for Runabouts, A. A. A. 1908 Tour.

it, as the conditions provided for running off any tie that may occur are such that one extra day will doubtless be found sufficient to decide which is the winner.

The trophy itself marks a departure this year, as, instead of the bronze figure awarded last year, a handsome silver shield has been substituted. This shield is made with a convex surface, making it stand out against its rosewood mount in relief. The shield itself is a heavy piece of pure silver, handsomely chased and engraved, the ornamentation in the lower part consisting of the representation of a runabout containing its driver and a passenger. Immediately above is the space intended for the name of the winner, while surmounting this is the inscription which follows. This reads: "Hower Trophy for Runabouts, Fifth Annual Reliability Touring Contest of the American Automobile Association; Buffalo-Boston-Saratoga. Presented by Frank B. Hower." The trophy itself will be placed on exhibition in New York this week. Cups and similar articles have become more or less commonplace as automobile trophies, owing to the great number that have been offered during the past few years, so that any departure from the ordinary is very welcome.

THE AUTOMOBILE CALENDAR.

AMERICAN.

Shows and Meetings.

June 25-27.....—Detroit, Third Annual Summer Meeting of Society of Automobile Engineers.

Dec. 31-Jan. 7..—New York City, Grand Central Palace, Ninth Annual Automobile Show, conducted by the American Motor Car Manufacturers' Association, with Exhibits by the Importers' Automobile Salon, Inc., Alfred Reeves, general manager, 29 West 42d St.

Jan. 16-23.....—New York City, Madison Square Garden, Ninth Annual National Show of the Association of Licensed Automobile Manufacturers. (Exact date to be announced.)

February, 1909.—Chicago Coliseum and First Regiment Armory, Eighth Annual National Exhibition, National Association of Automobile Manufacturers. (Exact date to be announced.)

Races, Hill-climbs, Etc.

June 13.....—Hartford, Conn., Orphans' Day, Automobile Club of Hartford.

June 13.....—Cleveland, Annual Hill Climb, Cleveland Automobile Club.

June 17.....—Boston, Readville Track, Postponed Race Meet, Bay State Automobile Association.

June 17.....—Buffalo, N. Y., Orphans' Day, Automobile Club of Buffalo.

June 20-26.....—Albany, N. Y., Annual Five-day Tour of the Albany Automobile Club.

June 24-27.....—New York and Philadelphia, Double-Head Endurance Run to Delaware Water Gap, under the auspices of the "Public Ledger" of Philadelphia.

June 24-27.....—Chicago, 1,200-mile Reliability Run, Chicago Motor Club.

June 27.....—Norristown, Pa., Skippack Hill Climb, Norristown Automobile Club.

July 4.....—Lowell Mass., 250-mile Road Race, Lowell Automobile Club.

July 4.....—Wildwood-by-the-Sea, N. J., Annual Speed Tournament, Motor Club of Wildwood.

July 7-8.....—Buffalo, N. Y., National Convention of the American Automobile Association.

July 9.....—Buffalo, N. Y., Start of the Fifth Annual A. A. A. Reliability Touring Contest.

August 14.....—Chicago, Third Annual Algonquin Hill Climb, Chicago Motor Club.

Sept. 5-9.....—San Francisco-Los Angeles Reliability Run, Automobile Dealers' Association of San Francisco.

Sept. 14.....—Chicago, Annual Economy Run, Chicago Motor Club.

Oct. 24.....—Vanderbilt Cup Race. Long Island Course, auspices of Vanderbilt Cup Commission.

FOREIGN.

Shows.

Oct. 11-18.....—Paris, International Congress and Public Exhibition on Roads and Road Making for Modern Locomotion, French Ministry of Public Works.

December.....—Paris, Eleventh Annual Salon de l'Automobile, Grand Palais, Automobile Club of France.

Race Meets, Hill-climbs, Etc.

June 1-18.....—Reliability Trials for Pleasure Cars, Automobile Club of Great Britain.

June 14.....—Mount Cenis Hill Climb, for Voiturettes.

June 9-17.....—Touring Competition for the Prince Henry of Prussia Prize, Germany, Imperial A. C.

June 15-19.....—Scotland, Annual Scottish Reliability Trials.

July 6.....—Voiturette Grand Prix, Dieppe Circuit (Automobile Club of France.)

July 7.....—Grand Prix of Automobile Club of France, Dieppe Circuit.

July 13-17.....—Ostend, Belgium, International Race Week, Automobile Club of Ostend.

Aug. 12.....—Ardennes Circuit Races and Coupe de Liederkerke, Automobile Club of Belgium.

Aug.....—France, Coupe de la Presse, Automobile Club of France. (Exact date to be announced.)

Aug. 29-30.....—France, Mont Ventoux Hill Climb, Vauclusien Automobile Club.

Sept. 1-8.....—French Voiturette Contest, Auspices "L'Auto."

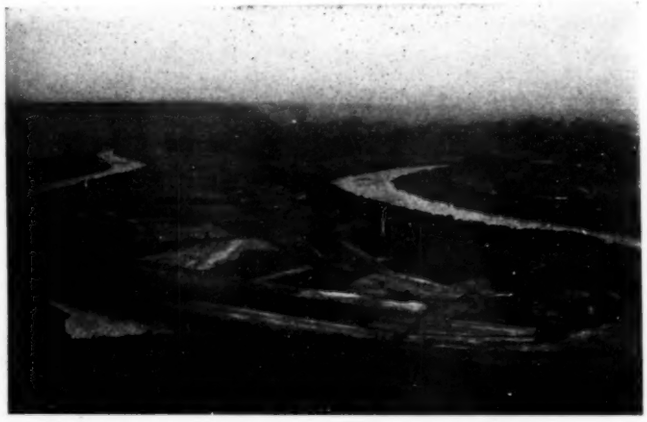
Sept. 6.....—Bologne, Italy, Florio Cup Race, Automobile Club of Bologne.

Oct. 11.....—Berlin, Germany, Gordon-Bennett Balloon Race, Aeronautical Club of Berlin.

HIGHER-PRICED CARS ARE SELLING IN THE SOUTH

By F. S. SLY, Traveling Correspondent for The Automobile.

MEMPHIS, Tenn., June 2.—There is a general feeling of prosperity prevalent in this city, as dealers report that they are not only selling more cars this year than they did at the corresponding period of 1907, but the cars are higher-priced. Not a little of this increased business is credited to the very successful automobile show that was held here last April, under the auspices of the Automobile Dealers' Association of Memphis, of which Jerome Parker is president, and W. S. Bruce sec-



Valley of Tennessee River from Lookout Mountain.

retary. This stimulated interest in automobiling to a very great extent, and there is no doubt that it will be repeated next year, developing into an annual fixture with the trade here.

But despite the fact that Memphis can boast of no less than 500 cars in use, and interest in automobiling runs high, there is no such thing as a club. The roads are good in every direction out the county line, the best run being that to Brownsville, situated 120 miles from here, the road being good all the way. There are quite a number of cars represented, and garage facilities are good. The Memphis Automobile Company represents the Thomas, White, Franklin and Buick, beside the Baker electric, while the Jerome P. Parker Company has the Ford and Stoddard-Dayton, and McDonald Automobile Company the Mitchell, Rambler and Holsman; the Cullen-Butler Company have the Premier, Reo and Auburn; W. S. Bruce & Company have the Welch, Maxwell and Columbia; the Lilly Carriage Company represent the Peerless and Oldsmobile, and H. A. White has the Pope-Toledo and Cadillac. Of these dealers the first six maintain modern and well-equipped garages, such as are to be found in the largest cities.

Nashville Not So Favorably Inclined.

Nashville, Tenn., June 4.—Nothing affords a more striking illustration of the value and influence of the presence of good roads as the condition of the automobile business here. While Memphis is congratulating itself on increased business and higher-priced cars this year, Nashville dealers complain that business is not as good as it was a year ago at this time. In spite of this, however, and the fact that the roads roundabout are in very poor shape, the city can boast of about 480 cars, as shown by the members of the license tags. The city streets are well paved, but outside good roads are few and far between, there being but two or three altogether, which goes to show that prosperity travels over well-paved highways. There was an automobile club here at one time, but interest in its welfare lagged to such an extent that it has finally gone out of existence. The pikes in this section need repairing so badly that autoists have got together and raised a subscription for the purpose.

Among the cars represented here are the Reo, handled by the Rock City Auto Company; the Rambler and Ford, represented by J. S. Roller; the Oldsmobile, White and Buick, for which the Southern Automobile Company is the agent; the Dorris and Stanley, handled by the Nashville Motor Car Company; the Stevens-Duryea, for which B. F. Bill is the agent; the Lambert, handled by J. W. Chester; the Mitchell, which is represented by the Keith-Simmons Hardware Company, and the Moon, for which Joseph Yarrow is the agent. With the exception of the last two, all these concerns maintain garages, and some of them are very well fitted up.

Chattanooga Is a Paradise for the Autoist.

Chattanooga, Tenn., June 6.—With its rugged scenery, that is dotted with many of the historic battlegrounds of the Civil War, this part of Tennessee, and Chattanooga in particular, offers a great many attractions to the automobilist, whether resident or on tour. The country is one of the most mountainous parts of the State, but the roads are among the very best that the entire South has to offer, owing to the fact that they have been built and are maintained at the expense of the Federal Government. One of the most beautiful leads up to Missionary Ridge and goes along the entire length of it. No better example of what the government can do in the way of road maintenance could be desired than this. Another good road that is quite accessible to autoists leads to the top of Lookout Mountain, 1,750 feet above the city. The county likewise keeps its roads in the best of shape, and is now boring two tunnels through the ridges on opposite sides of the city, in order to save the climb over them. This will be one of the first instances in this country where engineering practice has really been applied to road building. Tunnels are quite common on European roads, but they are an extreme rarity here. These tunnels will be connected by a broad chert boulevard five miles long, and part of which is already under construction. This material abounds hereabout, and is largely used in road making.

There are no less than five good garages here, maintained by the following: The Chattanooga Automobile Company, handling the Franklin, Cadillac and Packard; the Joyce Automobile Com-

Chattanooga, That Reposes at the Base of Old Lookout.

pany, representing the Thomas and Buick; the H. H. Burke Automobile Company, the Ford and Reo; the Crescent Automobile Company, the White, Lambert and Model; and the H. D. Stebbs Auto Supply Company, the Rambler. Beside the foregoing there is the Wallace Buggy Company, representing the Stoddard-Dayton, Mitchell and Cartercar. There are from 150 to 200 cars in use in the city, but as yet there is no club.

THE AUTOMOBILE

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ONE MAN'S VIEWS ON THE RACING "WAR."

Concisely put, going directly to the meat of the argument, and presenting the views of a man interested in autoing since its American inception, no better editorial view of the so-called "war" for the control of racing could be written than the following communication from one who confesses that it is written just to ease his mind:

Editor THE AUTOMOBILE:

The issue is now clearly defined, and, as I see it, it is the American manufacturer and the A. A. A. against the foreign maker and the A. C. A. The feeling among the foreign manufacturers toward their American competitors has progressed from contempt to respect, and from respect to fear. The foreigners realize that their "goose" which has been laying the "golden eggs" is in *extremis* and nearly cooked. The fact that all those having agencies in this country are advertising "bargain prices," and the falling off in value of importations this year of almost 50 per cent. as shown by the Custom House returns, tells the story in plain language, and indicates that the American public has finally awakened to the fact that the American manufacturers are now making as good, yes, better cars for American conditions than the foreigner.

The knell of the "importer" is sounded, and the spectacle of a metropolitan club, which is frankly striving for recognition as a national body, permitting itself to be used by the foreigners to bolster up their losing game, is pitiable and offensive to every true American who is patriotically wishing and working for the success of the American manufacturers. The American manufacturers are big enough and strong enough to decline to submit further to the dictation of the foreign clubs, which are merely the manikins of a select few of the foreign manufacturers who have not hesitated to so frame their rules as to secure for themselves every advantage. The Automobile Club of France killed the Gordon-Bennett, for the sole reason that it held the French manufacturers down to an equal chance for success with the rest of the world, and instituted a race that would permit their entries to greatly outnumber the other.

The cause for the manifest unfairness of some writers for the daily press can be clearly traced, and most of them are doing their papers an injustice which will surely react on their business management when the American manufacturers, who are their best advertisers, begin to ask some pointed questions. It may be that the business managers will wake up and forestall the necessity of replying to such embarrassing inquiries.

The Vanderbilt Cup race will surely be held, and the foreign manufacturers, who still hope to market a part of their production in this country, cannot afford to withhold their entries, although they may adopt the plan of entries by individuals to "beat the devil around the stump," and I confidently predict that the Vanderbilt Cup race will have more entries of foreign cars than the A. C. A. "Grand Prize," if it is ever held.

Vive la Vanderbilt Cup!

Borough of Brooklyn, New York City. FRANK G. WEBB.

Mr. Webb is a representative type of the American sportsman who lends his aid to a pastime purely from the love of it. For years he has served the Long Island Automobile Club in various capacities, was instrumental in its organization, and was a factor in the formation of a national body. Early in the progress of autoing, he objected to a single club "lording" it over the other clubs. His views will find favor among those who think one's own country should come first.

* * *

STRIVING FOR AUTO SIMPLICITY.

Generally speaking, it would seem that the time when a manufacturer deemed it incumbent upon himself to add a number of superfluous devices to his product to make the purchaser thereof think "he was getting his money's worth," to put it in the vernacular, had long since passed. Certain it is that the experienced buyer is not keen on parting with his money to acquire the maximum amount of steel and iron that a designer can work up into the shape of an automobile. Lightness consistent with adequate strength represents the guiding star of the up-to-date designer, but this end is not to be achieved by the addition of a number of useless, or what is the same thing, practically useless, devices, simply to enable the salesman to call the customer's attention to the fact that "It's all included in the price."

To mentally review the most successful American cars of to-day, and by these are meant those that have been successful from the very start, is to call to mind a succession of constructions distinguished more by their consistent simplicity of design than any other single feature. Even when reduced to its very simplest terms, the automobile is a piece of mechanism that consists of a comparatively large number of parts. That is, when only those that are actually necessary to enable it to perform its mission, are enumerated. Why, then, add things that only merit the contemptuous title of "doo-flickers," "go-dinkuses," and the like, from the experienced repairman? The day of "talking points" is over; the day of real merit has arrived, and merit needs no frills.

BUFFALO'S A. A. A. CONVENTION ASSURED SUCCESS

THINGS are to be done on a scale of elaboration never before known in connection with such events at the National Good Roads and Legislative Convention of the American Automobile Association, to be held at Buffalo, July 6-8. The practical demonstrations will be in the nature of a complete education. A total of 79 miles of road, costing upwards of $700,000, will be in actual course of construction, affording highway officers, contractors and others an unusual object lesson. The road-making will comprise highways of brick, macadam and gravel, and subsequently these various surfaces will be tested with different dust preventives. That this practical work will be as thorough as the entertaining, which is in charge of the Buffalo Automobile Club, is assured by the fact that it is in charge of a committee of very practical men, namely:

George C. Diehl, county engineer, Buffalo, chairman; Frederic Skene, State engineer of New York; John P. Kelly, division engineer, State of New York; F. H. Williams, resident engineer, State of New York; Joseph W. Hunter, vice-president, American Roadmakers' Association, and highway commissioner of Pennsylvania; W. E. McClintock, chairman of Highway Commission, Massachusetts; H. S. Sisson, chairman, Erie County Board of Supervisors, Good Roads Committee; John Satterfield, Automobile Club of Buffalo; Seymour P. White, Automobile Club of Buffalo; J. S. McFarland, Automobile Club of Buffalo; James D. Warren, Automobile Club of Buffalo; Henry P. Burgard, Automobile Club of Buffalo; and C. M. Croiner, Automobile Club of Buffalo.

This convention has grown to proportions beyond all the original ideas of its promoters, and has become an event of unusual importance. Not only are the automobile clubs and good roads associations sending delegates, but the governors of the several States are appointing official representatives. Delegates already have been appointed by the automobile clubs of the A. A. A. in different cities from coast to coast. These clubs and their delegates are as follows:

Los Angeles, Cal., Automobile Club of Southern California, Charles B. Hopper, secretary and treasurer.

Newark, N. J., New Jersey Automobile and Motor Club, Paul E. Heller, J. H. Wood and F. A. Cresselmire.

Springfield, Mass., Automobile Club of Springfield, Mark Aitken, A. E. Lerche, M. T. White and S. L. Haynes.

Elyria, Ohio, Automobile Club, A. L. Stark, W. N. Gates and A. L. Garford.

St. Louis, Mo., Automobile Club, Roy F. Britton, Sam D. Capen.

Wilkinsburg, Pa., Automobile Club, W. R. Stephens, A. J. Puffinburg and W. C. Cook. Alternates are S. L. Smith, Roy Wyse and J. M. Anderson.

Philadelphia, Pa., Automobile Club, Powell Evans, W. O. Griffith and S. Boyer Davis.

Philadelphia, Pa., Quaker City Motor Club, A. T. James, Edwin A. Lewis, Dr. W. J. Donnelly and L. E. French.

Chicago, Ill., Automobile Club, T. J. Hyman, Claude Seymour and A. R. Stumen.

Bridgeport, Conn., Automobile Club, S. T. Davis and A. L. Riker.

Wilkes-Barre, Pa., Automobile Club, Dr. E. C. Wagner and W. L. Raeder.

Malden, Mass., Automobile Club, A. E. Bliss, A. B. Tenny and C. P. Price.

Washington, D. C., Automobile Club, Robert B. Caverly, John K. Heyl and William D. West.

LEADING TRADESMEN STRONGLY SUPPORT A. A. A. TOUR

HOW, more than any other contest of track or road, the A. A. A. tour for the Glidden trophy has come to be a criterion for the buyers of touring cars, is evidenced by the tangible results in sales noticed by manufacturers. H. O. Smith, of the American Motor Car Manufacturers' Association, says: "It is natural that men who want touring cars should be guided by the performance of cars in this event. To what other can they look? They are not buying cup racers for family use, and the track races offer them nothing in the line of information concerning a car's road efficiency. The demonstrations of a few miles they get are of comparatively little value, as every one knows. What they want to know is how a car runs day after day, on different sorts of roads, and how it travels in comparison with other cars. This they learn from the Glidden tour, as they do from nothing else, and with the new rules, which the manufacturers have approved, and the system of having observers on the cars, the tour will be of more importance than ever. That the buyers of cars do watch this event and are guided by it can be proved in the most positive way. I know of many sales that can be traced as directly due to the showing made in the Glidden tour last year."

Another point of view, taken by a manufacturer who has an official position which makes it impolite for him to be quoted, is expressed as follows: "I think the agents have a right to expect the manufacturers to compete in the Glidden tour, no matter what the conditions of the trade. This event is known about and watched by automobilists all over the country, and it is mighty embarrassing for an agent to be asked why his car was not in the Glidden tour. Those who do not enter are apt to suffer from false inferences by buyers, who think that such non-contestants have lost confidence in their product. Our cars are all sold, but the agent is entitled to consideration just the same, and we want him to sell next year's cars as readily as he did this year's."

WILDWOOD, N. J., TO CELEBRATE THE FOURTH.

PHILADELPHIA, June 8.—Preparations for the annual carnival of the Motor Club of Wildwood, which is scheduled for July 3-4, are proceeding apace. The affair will open with a regularity run on Friday, July 3, from this city to the sea, over a roundabout course yet to be announced. Fully two score local automobilists have announced their intention of entering this portion of the program, while as many more will take part in the run unofficially. Eight events will make up the program of short-distance brushes over the mile course on Central avenue boulevard, which will feature the second day.

MR. BATCHELDER WILL WITNESS GRAND PRIX.

A. G. Batchelder, managing editor of THE AUTOMOBILE, accompanied by Mrs. Batchelder, sailed on Saturday, June 5, on the steamship *Oceanic* for a five weeks' trip abroad. A short time will be spent in England, after which they will visit Paris and later attend the Grand Prix on the Dieppe circuit, July 7.

Paris, June 9.—Marquis De Dion, president of the A. C. of France, and 300 others, are suffering from ptomaine poisoning, following the banquet held at the clubhouse this evening, and one man has already succumbed, while many others are very ill.

MADISON SQUARE GARDEN SHOW TO BE JANUARY 16-23

AT the meeting of the board of managers of the Licensed Association, June 4, it was decided to hold the ninth national automobile show at Madison Square Garden, January 16-23. The meeting was well attended. Col. George Pope made a revised report of the eighth national show, held last November, and also called the attention of the members to the progress being made for the ninth national exhibition. Architects and decorators are now at work preparing material to be submitted to the show committee for the decorative scheme and general floor plan of the Garden, and it is expected that at the next board meeting a decision as to just how the Old Garden will look for the ninth national show will be reached.

As a result of the very satisfactory results attained under the show committee of last year the board were unanimous in reelecting Col. George Pope as chairman of the new committee, with Charles Clifton and Marcus I. Brock as his associates, and M. L. Downs, secretary. Mr. Brock was a member of the show committee up to the time he resigned to go with the Autocar Company. He now represents the Autocar Company in association matters, and his efficient work on the show committee entitled him to reelection as a member of that committee.

Those present were: J. S. Clarke, Marcus I. Brock, Autocar Co.; W. C. Leland, Cadillac Motor Car Co.; M. S. Hart, Corbin Motor Vehicle Corp.; J. H. Becker, Elmore Mfg. Co.; H. H. Franklin, G. H. Stillwell, A. T. Brown, A. E. Parsons, H. H. Franklin Mfg. Co.; E. Hewitt, Hewitt Motor Co.; A. N. Mayo, Knox Automobile Co.; S. T. Davis, Jr., Locomobile Company of America; H. Lozier, Lozier Motor Co.; Wm. E. Metzger, Northern Motor Car Co.; F. L. Smith, Olds Motor Works; H. B. Joy, Packard Motor Car Co.; C. Clifton, George N. Pierce Co.; A. L. Pope, Pope Motor Car Co.; George Pope, Pope Mfg. Co.; E. D. Shurmer, Royal Motor Car Co.; G. E. Mitchell, Alden Sampson, 2d, R. H. Salmons, Selden Motor Vehicle Co.; E. McEwen, F. B. Stearns Co.; C. C. Hildebrand, Stevens-Duryea Co.; E. S. Church, Waltham Mfg. Co.; Thos. Henderson, Winton Motor Carriage Co.

INDEPENDENTS' SHOW WILL HAVE SPECIAL TAXICAB EXHIBIT

RECOGNIZING the important position that town cars are taking in the commercial and pleasure life of this country, the show committee of the American Motor Car Manufacturers' Association, at its meeting last week, decided to have a special taxicab division in connection with the annual automobile show, to be held at Grand Central Palace, New York, December 31 to January 7. Aside from the exhibits of the regular manufacturers, there will be a certain amount of space set aside where each maker will have the privilege of exhibiting one model of a taxicab or town car if that is a part of his regular production.

With the eighteen exhibitors of foreign cars comprising the Importers' Automobile Salon, and the score or more of American makers that are supplying the demand for this type of automobile, it is expected that the division will be complete enough to satisfy the most exacting. Exhibitions in this section will be limited to a single model of taxicabs.

It will be the first attempt to segregate these cars, that are now such an important part of the motor car pastime and industry. There will, of course, be the usual section for commercial vehicles, with pleasure vehicles on the main floor.

Proposals for an entirely new plan of decorating the Palace were received and considered at the meeting, but no announcement of this feature will be made for some time.

Plans for the association's Western show were submitted, and a representative of the association is visiting Chicago this week to confer with the Chicago Automobile Club and the Chicago Motor Club.

In attendance at the meeting were H. O. Smith, chairman; Benjamin Briscoe and Alfred Reeves, of the A. M. C. M. A.; E. R. Hollander, representing the Importers' Automobile Salon, Inc., and Peter S. Steenstrup, of the Motor and Accessory Manufacturers.

DELAGRANGE'S RECORD FLIGHT AT ROME.

PARIS, June 3.—Excluding the Wright brothers, in whom Europe has once more lost all faith, the world's new flying record belongs to Leon Delagrange, Parisian sculptor and amateur aeronaut, who has remained above the Place d'Armes at Rome for a period of 9 minutes 30 seconds. It is the longest time any machine of the heavier-than-air type has remained aloft under official observation. The distance covered was not officially measured, but from the rate at which the apparatus was traveling is calculated at rather more than five miles. The experiment took place early on the morning of May 27 and was watched by the King and Queen of Italy and members of the Italian court, the King personally congratulating the French aeronaut on the successful results obtained. A second flight over the same ground gave as a result five minutes in the air, distance covered being approximately three miles. Delagrange used his Voisin Frères aeroplane and Antionette eight-cylinder water-cooled engine.

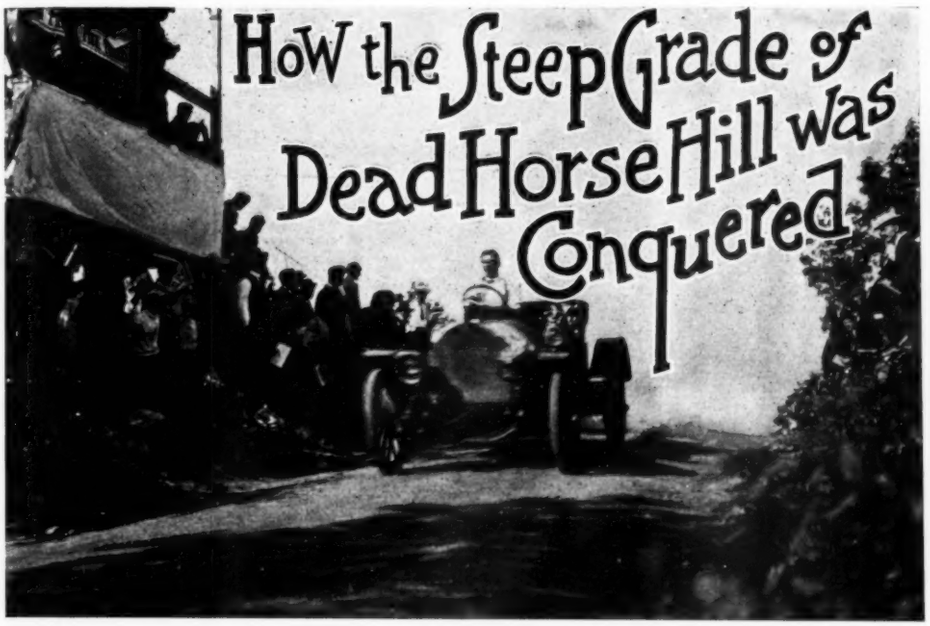
The Italian populace apparently have been overexpectant in the matter of aerial flights, for when in the face of a strong wind Delagrange soared aloft for a few hundred yards they were so disgusted that they expressed their feelings by uncomplimentary hissing. An Italian engineer who had been largely responsible for bringing Delagrange to Rome for the public demonstration was set upon and very unceremoniously handled.

REMISS AUTOISTS MUST PAY THEIR LICENSES.

INDIANAPOLIS, IND., June 8.—City Controller George T. Breunig opened his warfare against automobile owners who have not paid their city license fee this year by quietly filing about 100 warrants for their arrest last week. Up until noon Saturday a large proportion of this number had been arrested, thirty-eight being arrested Friday alone. Barely 200 of the 1,000 automobile owners of the city have paid the license fee this year. A large number of motorcycle owners are also delinquent, although the city officials are somewhat in doubt as to whether they should be taxed $3 as an automobile, or $1 as a bicycle.

METUCHEN ESTABLISHES A NEW SPEED TRAP.

METUCHEN, N. J., June 9.—Another pitfall for the unwary driver who has a desire to "let her out a bit" has just been established on the road from this place to New Brunswick. It is placed just at the beginning of a fine straightaway stretch, and that its location is an excellent one for the purpose is shown by its large takings, $400 in fines having been collected in one day. Autoists going that way should refrain from opening the throttle on anything that looks extra tempting for a spurt. There is also a trap being worked at Princeton, N. J., on the very edge of the town at the Kingston side. All automobilists are requested to keep these new speed traps in mind.



How the Steep Grade of Dead Horse Hill was Conquered

Thomas Detroit with Light as Pilot Winning Its Class Trial.

WORCESTER, MASS., June 8.—In the third annual automobile hill climbing contest, conducted by the Worcester Automobile Club, on famous Dead Horse Hill's mile long course, Saturday afternoon, June 6, premier honors for the gasoline class went to the Great Chadwick "Six," driven by Willie Haupt, who negotiated the course in 59 4-5, breaking the record of 1:01 2-5, established by S. S. Stevens, of Rome, N. Y., in a 90-horsepower Darracq, in 1906. Haupt's time was, however, lowered to 55 3-5 by L. F. Baldwin in a small steam car of Massachusetts manufacture.

The biggest place winner of the meet was the Thomas-Detroit, which captured four firsts and three seconds. Two of these firsts, for stock cars, 60.1 to 75-horsepower, and the free-for-all for stock gasoline cars, were captured by driver Levi Lorimer, another by J. S. Harrington, who drove his Thomas-Detroit in the free-for-all for amateurs, and the four first was taken by Oliver Light, who won the event for gasoline cars selling from $2,001 to $3,000. The Stevens-Duryea was a two-time winner, in both events being piloted by L. H. Hancock. The car was a consistent performer, the time in each event being 1:15.

In the little fellows' class the Maxwell, driven by Wright Pollard, scored a victory over the Ford, driven by H. H. Rogers, by the narrow margin of two seconds, and the Jackson, driven by E. P. Blake, won from the Maxwell and Selden in the class for cars ranging in price between $1,251 to $2,000.

The course was in perfect condition. The club had expended hundreds of dollars repairing and building it up, and it was sprinkled with calcium chlorine, which did away with all dust. The mile of roadway utilized for the climb was policed by sixty officers, who had very little to do, for, because of a new State law, the course was closed to all traffic during the hours of the race, and the club had closed up its opening and had fenced it off on each side. The climb was also a success financially, as the club was allowed this year to charge an admission to points of vantage along the course.

Weather conditions were ideal, and the automobiles owned the city for the day. More than 20,000 spectators lined the course throughout the afternoon. The climb was the Mecca for thousands of automobiles from all over New England, and it was easily the biggest and best the club has yet conducted, and the announcement that the club intends to make it an annual affair is most welcome.

There was but one protest. The Peerless people protested the Big Six Stevens-Duryea, on the ground that its body was not a stock body. The protest was upheld, and the car barred from the stock car event. However, in one stock event the Little Six Stevens-Duryea went in and trimmed the Peerless entry by two-fifths of a second.

Not an accident marred the running off of the events, which were cleaned up in good season. Barney Oldfield's nonappearance was a disappointment to many enthusiasts, but it is supposed that the accident in which he and his wife and others figured in Lowell last Sunday night was what prevented him from coming.

A noticeable feature of the gathering of more than fifty cars of all sizes that comprised the entries was the fact that there was but a single representative of the air-cooled type. This was the 16-20-horsepower Cameron, and the manner in which it performed on the mile rise served to bring it strongly into the limelight, as it made the climb in 1:45 2-5, which is the record for gasoline cars up to 20-horsepower. The summaries:

GASOLINE STOCK CARS 60.1 TO 75 H.P.

Car	H.P.	Driver	Time
Thomas Detroit	40	Levi Lorimer	1:15
Peerless	57	J. B. McKinney	1:15 3-4

GASOLINE STOCK CARS 40.1 TO 60 H.P.

Peerless	57	J. B. McKinney	1:16
Stearns	60	Morgan Kent	1:16 2-5
Thomas Detroit	40	Oliver Light	1:16 3-5
Thomas Detroit	40	Levi Lorimer	1:20 2-5

Willie Haupt Sending up the Great Chadwick Six in :59 4-5.

Stevens-Duryea That Captured Two Events in 1:15.

GASOLINE CARS 24.1 TO 40 H.P.

Car	H.P.	Driver	Time
Stevens-Duryea	35	L. H. Hancock	1:15
Thomas Detroit	40	L. Lorimer	1:17
Thomas Detroit	40	Oliver Light	1:20 2-5
Corbin	32.4	John Dower	1:20 2-5
Corbin	32.4	James Corbett	1:20 4-5
Knox	30.6	Wm. Borque	1:23 2-5
Marmon	40	F. E. Wing	1:42
Marmon	40	J. E. Hines	1:49 1-5
Wayne	32	Fred Allen	2:00 2-5
Stoddard-Dayton	35	John Miller, withdrawn.	

GASOLINE CARS 15.1 TO 24 H.P.

Buick	22	Chester M. Stanley	1:49
Overland	22	J. E. Pugh	2:42 4-5

FREE-FOR-ALL AMATEURS—STOCK GASOLINE CARS ONLY.

Thomas Detroit	40	J. S. Harrington	1:18 2-5
Peerless	57	J. L. Snow	1:18 4-5
Marmon	40	F. E. Wing	1:53
Stearns	60	Morgan Kent	2:31

MOTORCYCLES—PROFESSIONALS.

Indian	5	C. F. Hoyt	1:04 2-5
Indian	5	Herbert Clark	1:29
Indian	5	Howard Clark	1:31
Indian	4	E. N. Allen	1:51 2-5

CARS OF ALL TYPES AND MOTIVE POWER.

Stanley	30	L. F. Baldwin	:57 2-5
Chadwick	60	Wm. Haupt	:59
Berliet	54	H. F. Grout	1:03 1-5
Stevens-Duryea	50	P. J. Robinson	1:06 3-5
Mercedes Flying Dutchman	90	Charles Basley	1:07
Columbia	28.9	J. J. Coffey	1:15
Knox	30.6	Wm. Bourque	1:15
Corbin	36.1	John Dower—did not finish	

GASOLINE STOCK CARS, $850 OR LESS.

Maxwell	14	Wright Pollard	2:13
Ford	20	H. E. Rogers	2:15

WORCESTER COUNTY CHAMPIONSHIP.

Stanley	20	F. Dewey Everett	1:16
Thomas Detroit	40	J. S. Harrington	1:16 4-5

GASOLINE STOCK CARS, $851 to $1,250.

Buick	22	Chester M. Stanley	1:40 2-5
Cameron	21	F. F. Cameron	1:45 2-5

GASOLINE STOCK CARS SELLING FROM $1,251 TO $2,000.

Jackson	35	E. P. Blake	1:53
Maxwell	24	L. S. Tyler	2:06
Selden	28	A. R. Miles	2:32

The Little Maxwell Winning in the $850 Class.

FREE-FOR-ALL—STOCK GASOLINE CARS ONLY.

Car	H.P.	Driver	Time
Thomas Detroit	40	Levi Lorimer	1:17 1-5
Corbin	32.4	John Dower	1:19 1-5

GASOLINE CARS SELLING FROM $2,001 TO $3,000.

Thomas Detroit	40	Levi Lorimer	1:15
Thomas Detroit	40	Oliver Light	1:16 1-5
Knox	30.6	Wm. Bourque	1:20 1-5
Corbin	32.4	James Corbett	1:22
Corbin	32.4	John Dower	1:22 1-5

GASOLINE CARS FROM $3,001 TO $4,000.

Stevens-Duryea	36.1	L. H. Hancock	1:15
American Roadster	44.1	Arthur J. Andrews	1:19 3-5
Marmon	40	F. E. Wing	1:41 1-5
Marmon	40	J. E. Hines	1:49 1-5

GASOLINE CARS, $4,001 AND OVER.

Peerless	57	J. B. McKinney	1:16 1-5

RECORD OF HILL—OPEN TO EVERY TYPE.

Chadwick	60	Wm. Haupt	1:00
Berliet	54	H. F. Grout	1:03 3-5
Mercedes	90	Charles Basley	1:04 1-5
Stevens-Duryea	50.1	P. J. Robinson	1:05 2-5
Corbin	36	John Dower	1:10 2-5

SPECIAL EXHIBITION EVENT OPEN.

Stanley	30	L. F. Baldwin	.55 3-5
Chadwick	60	Wm. Haupt	:59 4-5
Berliet	54	H. F. Grout	1:02 2-5
Stanley	30	Fred Marriott	1:19 2-5

COMING EVENTS IN WILLIAM PENN'S BURG.

PHILADELPHIA, June 8.—Interest in the *Public Ledger's* tournament in the Poconos, scheduled for June 24, 25, 26 and 27, has increased here with the elimination from the table of fixtures of the various hill-climbs hereabouts. When the Orphans' Day stunt, next Wednesday, and the Quaker City Motor Club's first track meet of the year, scheduled for next Saturday, are out of the way, the Monroe countyites' carnival will have a free field. A little mix-up with the Norristown Automobile Club, due to a conflict with its Skippack hill-climb on the 27th, was sidestepped by transferring the Delaware Water Gap open and the Canadensis amateur hill climbs to Thursday, thus allowing prospective entrants ample time to take in both.

Peerless and Driver McKinney Ready for the Start.

Waiting at the Foot of the Hill for Starting Signal.

THINGS THAT ARE GOING ON IN CLUBDOM

NEWS OF SOME OF THE CONNECTICUT CLUBS.

HARTFORD, CONN., June 8.—The Automobile Club of Hartford will conduct a series of gymkhana games at Charter Oak Park, June 19, in connection with the Hartford Hospital Benefit. H. P. Maxim and C. H. Gillette have nearly completed the details, and everything points to the complete success of the occasion. It was part of the original plan to hold races on the celebrated Charter Oak track, but the condition of the course at this time does not make this feasible.

The first hill climb of the recently organized Automobile Club of Rockville promises to be a lively affair. There have been promised up to date the following cars: Isotta, Stearns, Simplex, Mercedes, Columbia, Pope-Hartford, Knox, Mitchell, Maxwell, Ford, Oldsmobile, Thomas, Packard and Franklin, and the chances are good that Bernin's Renault will negotiate the straightaway course June 30. H. P. Maxim will be starter, and C. H. Gillette referee. In all probability the Hartford club will conduct a run to the hill. The winners of perfect scores in the recent endurance run conducted by the Automobile Club of Hartford are each to receive a bronze medal containing a fac-simile of the Kohn trophy. This was presented by Albert M. Kohn, of the House Committee.

The sign post committee of the Automobile Club of Hartford will post the road to Worcester by way of Rockville. The main route from Hartford to Worcester by way of Springfield is now undergoing repairs above Palmer, which necessitates a detour from the main highway. Many tourists have cut out Hartford altogether in consequence, and but few of them are aware that Worcester and Hartford are to be reached by the Rockville route. The committee will also post various other routes throughout the State.

A. C. A. TO HOLD SERIES OF PLEASURE TOURS.

NEW YORK, June 8.—According to an announcement made by the Bureau of Tours of the Automobile Club of America yesterday, the club will hold the first of a series of tours from June 19 to 28, the "ideal tour" route of New England having been selected for the first run. From New York the first day's itinerary takes the tourists to Waterbury, Conn., thence to Manchester, N. H., on the second day, and from there to Sunapee Lake at the close of the third day. Bretton Woods will be the goal on the fourth day, and the tourists will stop over a day there. On the fifth running day the night stop will be Poland Springs, Me., while the next day's run will take the tourists into Boston, where another one-day stop will be made. Two days will be consumed on the run home from Boston, Waterbury, Conn., again being made the stopping place for the night. A plan has been devised to avoid the dust nuisance as much as possible, and details of it will be published later. In the morning of each day the low-powered cars will be sent away first, then the medium-powered and lastly the heavy cars, while after lunch the order of starting will be reversed. There will be no entry fee for the tour, as it is simply for pleasure.

TOLEDO CLUB BEGINS GOOD ROADS CAMPAIGN.

TOLEDO, O., June 8.—At a dinner given at Bowling Green, O., last week, nearly a hundred city and county officials gathered together at the invitation of the Automobile Club of Toledo to talk over the problem of good roads. Officials representing the city of Toledo, Lucas, Wood and adjoining counties, as well as smaller towns attended at the Hotel Milliken, to discuss the best methods of road building and improvement. It was decided to postpone definite action until a later meeting, which will be held in the near future. The club went on record as being utterly opposed to reckless driving and scorching.

HOW PITTSBURG GAVE ITS ORPHANS A RIDE.

PITTSBURG, PA., June 8.—About 750 orphans of Greater Pittsburg enjoyed a long ride which the Automobile Club of Pittsburg gave them in 104 autos which were provided for the occasion, Wednesday, June 3. A clear, fair day made the event one of the most enjoyable the little folks have ever taken part in. At 10:30 the automobiles proceeded to the different institutions and gathered up the children and were at Carnegie Lake for lunch.

The procession of automobiles attracted much attention as it passed through the main streets of the city. One of the pleasing events of the day was the meeting with Speaker Joseph G. Cannon of Illinois, who was touring Pittsburg in the car which had brought him from Washington. He made a neat little speech to the children, and in return was greeted with rousing cheers as a candidate for the Presidency. The children were taken through all the parks of the city under the guidance of Edward Kneeland and George E. Painter, who with Chief Ordinance Officer Murray A. Livingston acted as escorts for the crowd.

ACTIVITIES OF THE TWIN-CITY AUTO CLUBS.

MINNEAPOLIS, June 8.—One of the latest innovations introduced by the Minneapolis Automobile Club is a registration bureau for drivers. Whenever a man applies for work, he registers, and his record is then looked up and the membership of the club kept posted as to those applicants that are desirable, or otherwise. June 12 has been set down as the date of the first annual celebration of Orphans' Day. Preparations are being made to entertain 400 children, and in addition to the parade and ride through the Twin Cities they will be taken out to Lake Minnetonka and given a real country picnic day. The club has also made arrangements to carry the delegates to the national convention of park commissioners, which convenes here in August, on a trip through the parks.

The St. Paul Automobile Club's headquarters now boasts of a novelty in the shape of an up-to-date Chinese restaurant, presided over by a slant-eyed chef.

ROCHESTER CLUB BEGINS A LIVELY PROGRAM.

ROCHESTER, N. Y., June 9.—Beginning to-morrow, a seven-day, non-stop endurance run will be held, under the auspices of the Rochester Automobile Club. The route covers a circuit of practically eighty miles, and takes the contestants through the center of the city twice on each round trip. A penalty of two points for each minute the engine is stopped will be incurred, and one point for every minute consumed in making other repairs, with the exception of tires. The contesting cars, all of which have been entered by local concerns, are the Gearless, Mora, Selden, Thomas, Mitchell and Studebaker.

This is only the opening of more than a month's activity, as the club has entered a team in the A. A. A. Reliability tour, and has also planned a big run to the Buffalo convention July 8. The celebration of Orphans' Day has been postponed to August 1. The membership of the club is now 481, and Secretary Bert Van Tuyle is confident that the 500 mark will soon be passed.

VIRGINIA ADDS TO ITS GROWING CLUB LIST.

SUFFOLK, VA., June 8.—The latest addition to the rapidly growing list of automobile clubs in this State is the Automobile Club of Suffolk. It was organized here last week with the following officers: President, C. A. Shoop; vice-presidents, W. N. McAnge and B. L. Saunders; secretary and treasurer, R. L. Gaskins. The club will devote its endeavors largely to the matter of road improvement, which is badly needed in this section.

ACTIVITY IN FRANCE'S GRAND PRIX PREPARATIONS

PARIS, June 1.—In all probability there will be 52 cars in the Grand Prix on the Dieppe circuit, July 7, for Porthos has just put in a third car, at double fees, and both Rochet-Schneider and Mors are expected to enter full teams of three each. Even without any additions the number stands at 46, which is a record in point of numbers, last year's Grand Prix uniting 38 cars, and the speed test of 1906 bringing together 34 competitors. Taking the two events together, it is by far the largest automobile race gathering ever held on a course, the total entries for July 6 and 7 reaching no less than 114, of which 62 are in the voiturette contest. At a time when touring competitions in Europe are, with one or two rare exceptions, failing to attract entries, this is strong proof of the popularity of racing, the announcement of the conditions of the race a long time in advance being responsible for the record entry.

Practically all the racers are on the road. Though drivers on the whole did not receive their 1908 cars until the end of May, they have by no means been idle, every European connected with the Grand Prix having been out on last year's models or on fast touring cars since the middle of February. Szisz, of the Renault team, as soon as he received his Grand Prix racer, immediately set out for trial trips in the neighbourhood of Orleans. Caillois and Dimitri, who will complete the team, now have their machines on the road.

Externally the Renault racers are identical with those of last year, and it is only by close examination that differences can be detected. As a matter of fact, however, they are entirely original cars, the regulations making it impossible to make use of 1907 racers in any way.

All three Bayard Clement racers are on the road in the hands of Rigal, Gabriel, and Hautvast. Hemery was one of the first to receive delivery of a racer, and has his Benz thoroughly tuned up already. Heath, Farman and Cissac have just received their Panhards, chain-driven machines differing entirely from the hook-nosed racers with radiator on the dash which failed to finish last year. Nazzaro, Lancia, and Wagner, stlil looked upon as the most formidable team, are believed to be yet waiting for their new cars. Not much can be learned of the Fiat racers, but from the fact that Wagner is still around Paris his 1908 racer cannot be ready.

It is quite probable that a second tire and gasoline station will be established on the Dieppe circuit in order to diminish the risk of any car being left stranded through lack of tires or any tool. Last year all work had to be done opposite the grandstand, in full view of the spectators, and it was intended to repeat this plan. Competitors, however, have complained of the distance, and the Sporting Commission is considering the advisability of establishing a second station at Fresnay-Folny, about half way round the course.

According to the supplementary regulations just issued by the Automobile Club of France, Grand Prix racers must be presented for weighing in July 3 and 4 between 8 A. M. and noon and 2 and 7 P. M. Verification of the cylinder bore can be made at any time and place, on giving notice to the Sporting Commission after July 1. When they have been examined and found correct each cylinder will be stamped in a suitable manner and spare cylinders may be treated in the same manner.

At the weighing-in shed near the starting point the cars will be placed over a bed of sawdust and the engine run at full speed for a few minutes in order to verify the exhaust. If the sawdust is disturbed the exhaust pipe will have to be altered, until no disturbance is created, or if that is impossible the car will be disqualified. Where the maximum weight of 1,100 kilos is not attained by the car with its lightest set of tires, without water, oil, gasoline or spare parts, the amount must be made up by the addition of a bag of ballast sealed and attached to the car by a lead seal. At the end of the race the first four cars must have their cylinder dimensions verified and their carbureter and inlet pipe examined to ascertain that no "doping" has taken place.

THE THOMAS GRAND PRIX CANDIDATE ARRIVES AT DIEPPE

DIEPPE, FRANCE, June 3.—America's only team in the Grand Prix has arrived here and is now making arrangements for a center near the course from which to train for the race of July 7. Harry S. Houpt, who is accompanied on his European trip by Mrs. Houpt, and their niece, Miss Dorothea McCartmey, is acting as race manager and trainer and believes that he will have five weeks in which to prepare the Thomas car and it should make a great showing. A mistake which has been made by every previous American entrant in a European race is too late arrival on the ground, with the result that the cars have never been properly tuned up and drivers have had an imperfect knowledge of the course. Even with this early arrival, the Thomas racing car will not be allowed on the course except on a few special days yet to be appointed by the Racing Board, that authority having rigorously barred everything but stock touring cars from the Dieppe triangle.

Changes were made at the last moment in the composition of the Thomas team, the men who came over on the *Adriatic* being Lewis Strang, who will drive the car; William Knepper, the mechanic, and Montague Roberts, reserve driver. In addition two skilled mechanics from the factory are with the party. Strang has had some experience of the Dieppe course, for last year he was here as mechanic for Walter Christie, who, to tell the truth, failed to impress the Frenchmen with the speed qualities of his front-drive vehicle. Knepper, the mechanic, was last in France for the 1905 Gordon Bennett race in Auvergne, when he accompanied Herbert Lytle on the Pope car, which had the distinction of being the first American automobile to officially finish in a European speed test.

French Makers Don't Care for Fuel Race.

PARIS, June 3.—French constructors do not appear to appreciate the efforts of their national club to provide them with a fuel consumption race for touring cars, the Coup de la Presse having closed with but 16 cars engaged. Last year a week's preliminary touring was followed by a long distance speed test on the Lisieux circuit in Normandy. This year the touring portion has been abandoned, the cars being required merely to prove their speed and economy in a two-day race on the Dieppe circuit, August 3 and 4. The cars engaged comprise teams of three from Peugeot, Cottin & Desgouttes, De Dion, Benz, Gobron, and a single car from Westinghouse. As will be seen, all are French with the exception of the Benz. The fuel allowance is 19 liters per 100 kilometers, which works out at the rate of approximately 15 miles to the gallon.

A similar event for small cars to be held on the same circuit on a preceeding day has united but ten engagements, three being from Berliet, two from Peugeot, two from De Dion, and one each from the Vinot, Gladiator, and Rebour. These smaller cars are allowed 10 liters per 100 kilometers, or equal to about 28 miles to the gallon.

POPE RECEIVERS MAKE FAVORABLE REPORT.

HARTFORD, CONN., June 8.—The receivers of the Pope Manufacturing Company, Albert L. Pope, George A. Yule and Albert J. Tamlyn, have filed a petition to Mahlon Pitney, chancellor of the State of New Jersey, setting forth the results of business since their appointment and asking that they be authorized to manufacture 700 Pope-Hartford cars of the 1909 model, also 50,000 bicycles. In response to this petition the stockholders and creditors of the company are cited to appear in the chancery chambers at Newark, Wednesday, June 17, at 10 A.M., to show cause, if any, why the receivers should not be authorized as mentioned above. It goes without the saying that Hartford interests desire the granting of the petition.

The outlook at the Pope No. 1 plant at this time is very encouraging. The receivers state that 500 machines of the 1908 Pope-Hartford model have been built and 400 have already been shipped and the balance will be out shortly. An inventory of the property in their possession and the disposition made of it is also given. The report shows that the operations of the Hartford plant since the appointment of the receivers up to May 1 have resulted in a net profit of approximately $215,890.20, and the profits for the year ending on July 1 are estimated to be $405,022.80. The profits of the Westfield factory net $35,797.49, and the profit for the year is estimated to be $69,399.47. The factory at Hagerstown, Md., according to the receivers, has been operated at a profit, which up to May 1 amounts to $17,546.85. The factories have been disposed of in Illinois, two of which netted $236,000.

MRS. TEAPE AND DAUGHTER NEAR OMAHA.

The first stage of the transcontinental trip which is being made by the two ladies who are touring from Portland, Maine, to Portland, Oregon, was completed with their arrival in Chicago on June 1. Leaving Portland, Maine, on May 14, in an 8-horsepower Waltham-Orient runabout, Mrs. E. E. Teape and her daughter, Mrs. Mackelvie, inaugurated the first attempt of a transcontinental tour by women. The trip from Portland to Buffalo was uneventful, but beginning at Buffalo the road conditions after the recent rains made traveling very heavy and burdensome. This was especially so in Ohio and Indiana, where in some instances not more than four miles an hour could be made.

In writing of the trip, Mrs. Teape was enthusiastic over the treatment which she received from autoists, calling attention to the good-fellowship which existed. In nearly every instance pilot cars and guides were willing to put them on the right road, without loss of time or annoyance of misdirection. The tourists left Chicago June 2, headed for Omaha. When the condition of the roads is considered, the fourteen days from Portland to Chicago is most remarkable time, and Mrs. Teape is confident that she will be able to reach Portland, Oregon, by July 1.

INDIANIANS CELEBRATE AUTOMOBILE DAY.

CRAWFORDSVILLE, IND., June 8.—Under the auspices of the Commercial Club, automobile day was observed here last Thursday by several hundred automobile owners and their friends. The main feature was a parade during the afternoon, covering several blocks in length. There were visiting drivers from Kokomo, Frankfort, Indianapolis, Lafayette and South Bend in large numbers, Kokomo alone sending about fifteen automobiles. Prizes were awarded to winners of the various events.

Edgar Apperson of Kokomo, driving his four-cylinder Jack Rabbit, won the hill climbing contest, the egg race and the four blocks sprint. The Indianapolis Motor Car Company of Indianapolis was awarded two prizes on their Rapid Pullman, which was the largest car in the parade and also carried the most passengers, having forty-three passengers on board. Frank Sweigert of Kokomo was adjudged the best gentleman driver, and won the obstacle race, there being a number of other events of interest on the program as well.

GREAT WESTERN SHOULD HAVE HAD CREDIT.

ALBANY, N. Y., June 8.—In reporting the hill climb held under the auspices of the Albany Automobile Club, on Menands hill, May 23 last, an error crept into the report which was published in THE AUTOMOBILE a few days later. This was in the issue of May 28, page 763, and in Event 8, which was for gasoline touring cars up to $1,250, it was stated that Cadillac was the winner. This was an error, as there was no car of this make entered in that event, the only contestants being a Great Western car, made by the Model Automobile Company, Peru, Ind., and which carried the number 12, and a Buick. The former won in 1:36, while the second entrant could not do better than 2:40. The injustice of the error is the greater as this $1,250 car bettered the times of several other cars ranging from $1,700 to $2,500, from 3 to 9 seconds.

CORBIN WAS A WINNER AT ALBANY.

In the account of the very successful hill-climb held under the auspices of the Albany Automobile Club on Menands hill, May 23, mention of the event for runabouts ranging in price from $2,000 to $3,000 was inadvertently omitted altogether. The error was a great injustice to the Corbin, the winner in this class, as its time of 1:02 1-5 was not alone much better than any of its competitors in this event, but also lowered the times of all but the first to finish in the $3,000-and-over runabout class, and all but the first and second to finish in the free-for-all runabouts, some of which listed at $5,000 or over.

PREST-O-LITE FACTORY AGAIN BURNS.

INDIANAPOLIS, IND., June 8.—For the third time in less than a year the local plant of the Prest-O-Lite Company was damaged by a series of small explosions Saturday. While the loss to the plant was small, the damage to buildings in the neighborhood, including St. Vincent's Hospital, was much larger. The cause of the explosions has not yet been determined, according to Carl G. Fisher, of the Fisher Auto Company, who, with James A. Allison, owns the plant.

The loss on the Prest-O-Lite plant is estimated at from $1,000 to $2,000. Other losses have not been fixed.

RESULTS OF WASHINGTON ENDURANCE RUN.

WASHINGTON, D. C., June 9.—The Thomas-Detroit won the cup for the lowest score made by a touring car in the 164-mile endurance run of the Washington Automobile Club, which was run to-day. The Stearns finished first in the roadster class, while the Ford and Buick runabouts were tied in the third division. The course lay through three States, Maryland, Virginia and West Virginia, and included some of the roughest roads in the eastern section of the country.

STEARNS DRIVER LEINBACH IS BANQUETED.

BALTIMORE, MD., June 8.—E. L. Leinbach, who piloted the Stearns car to victory in the 100-mile race at Pimlico, on Decoration Day, was the guest of honor at a dinner given to owners of Stearns cars and their friends by President John H. Schaab, of the E. L. Leinbach Automobile Company, local agents for the car. The dinner was held at Mount Holly Inn. The cup won by Mr. Leinbach was on exhibition, and was greatly admired.

REO COMPANY CUTS ANOTHER MELON.

LANSING, MICH., June 5.—A dividend of 40 per cent. has just been paid by the Reo Motor Car Company of this city to the company's stockholders. This is the second dividend of the year, the first, of 20 per cent., having been paid on April 18. This makes a total of $600,000 paid in dividends so far this year on the capital stock of $1,000,000. The company is now making thirty cars per day.

Fording Southern Streams in Canvas Protected Franklin

Salesman L. E. Hoffman has driven this 1908 Type D Franklin demonstrator over 10,000 miles, visiting all Franklin dealers in the South. Fording streams in that territory is so frequent that he has a canvas bag affair that he slips over the front end of the hood to prevent water splashing on the motor.

QUAKER CITY NOW HAS TAXICAB SERVICE.

PHILADELPHIA, June 8.—Last Monday, with ten Thomas vehicles, the first taxicab service was inaugurated here, operations being confined to the various local stations of the Pennsylvania railroad until the advent of additional permits an extension of the service. The public took to the innovation immediately, and there were few intervals of rest, either day or night, for the drivers. Headquarters for the taxicab service have been established at the big new garage of the Bergdoll Motor Car Company, at Broad and Wood streets, and the management has been placed in the hands of Robert A. Parke, former manager of the taxicab branch of the Thomas factory, and who later established the taxicab service in Washington, D. C.

The rates of fare are considered decidedly moderate. Thirty cents is the charge for the first half mile, not exceeding four persons, and ten cents for each additional quarter mile, with a charge of ten cents for each six minutes of waiting. Trunks and packages carried outside call for additional payment of 20 cents each. There is no charge for calls within a radius of half a mile of the cab stand; outside that limit the charge is 20 cents a mile. Passengers dismissing a cab less than three miles from the stand are not charged extra; over the three-mile limit there is a charge of 20 cents for each mile or fraction thereof in excess of that distance. The innovation is already making heavy inroads on the business of the horse-drawn cabs, and the popularity of the taxicabs is increasing daily.

Packard Testers Celebrate Completion 1908 Output

When the last of the Packard 1908 cars were given their final test the testers celebrated the occasion and emphasized the fact that they had completed the year's output of 300 more cars than were made in 1907, twelve days ahead of schedule time.

PICKED TO SUCCEED WALTER WHITE.

CLEVELAND, June 8.—Walter Rheineck, a slightly-built young lad scarcely out of his teens, is slated to step into the shoes of Walter White as a racing driver, according to the local White people. For some time past Rheineck has been traveling with White as his mechanician, and has thoroughly mastered the car. He has nerve in abundance, and it is thought will make an admirable driver. It is quite probable that he will be given his chance in the local hill climb June 13. Rheineck, up to about a year ago, was one of the star track athletes at Central high school, where he captained the track team. He has never been particularly strong, but is a bundle of grit and nerves.

PREMIER 100-MILES-A-DAY PROGRESSES.

INDIANAPOLIS, IND., June 8.—The Premier Motor Manufacturing Company expects to run one of their four-cylinder models 10,000 miles by September 1. With the slogan "100 miles a day for 100 days" the car left Monument Place, in this city, last Monday morning. Joe Moore, one of the veteran Premier drivers, is driving, and prospective purchasers are acting as observers from day to day. The daily run is to be made despite weather conditions, and with no attempt to establish a speed record.

Premier Model 30 Century Car Starting 100 Days' Run

Last Monday the car, after being started by Chief of Police Robert Metzger, ran to Dublin to meet the Glidden Pathfinder, driven by Ray McNamara. On Thursday George Weidley and some friends rode in the car to the automobile show at Crawfordsville. The run is attracting much attention.

NEW RELIANCE COMPANY BUYS OLD ONE.

Owosso, MICH., June 8.—The Reliance Motor Truck Company of Owosso has purchased at a receiver's sale the business and assets of the old Reliance Motor Truck Company of Detroit, and the business will be hereafter carried on in Owosso. The new company has been incorporated with a capital of $250,000, of which $150,000 has been subscribed and mostly paid in by local citizens. A manufacturing plant will at once be erected here. The officers of the company are: President, Fred O. Page, Detroit; vice-president, A. M. Bentley, Owosso; secretary and treasurer, W. F. Benkelman, Owosso.

PICNIC AND PARADE OF OLDSMOBILISTS.

Gen. John J. Cutting will promote the third annual reunion of Oldsmobilists on June 20. It will embrace a parade and a picnic at the Columbia Oval Cricket Club grounds. Oldsmobile owners present with their cars will draw for the choice of an Oldsmobile $3,000 palace touring car, or gentleman's roadster.

BRIEF ITEMS OF NEWS AND TRADE MISCELLANY

The National Motor Vehicle Company, Indianapolis, Ind., has canceled its distributer's arrangements with the Ralph Temple Auto Company, Chicago, which has handled the line for several seasons. Other arrangements for representation have not yet been made.

Reports in regard to European racing events this season show that a long string of victories is being credited to cars with Continental tires. Included in the series is a race at the Brooklands track for 90-horsepower cars, in which D. Resta came in first with a 76-horsepower Mercedes in the phenomenal time of 93 miles an hour.

In making mention of the changes in the sales management of the Spare Motor Wheel of America, Ltd., in THE AUTOMOBILE last week, it was inadvertently stated that the sales department at 237 Michigan avenue, Chicago, was a branch house, while, as a matter of fact, this is the main office of the company. The factory is located at St. Anne, Ill.

Protests filed against E. Linn Mathewson, who won the Rocky Mountain Cup race with a Thomas-Detroit Forty, have been decided adversely by the official committee. The protest was based upon the claim that the Thomas-Detroit Forty *Blue Bird,* in which Mathewson won the race, was not a stock car. Mathewson immediately demanded that the car be examined by a committee of experts. The committee made a report in Mathewson's favor.

Consistent with the faultless performances of Pennsylvania tires in the most important racing events of this season was their triple victory at the Pimlico track races near Baltimore on Decoration Day. E. L. Leinbach, in a Stearns 60, equipped with Pennsylvania tires, not only won with ease the 100-mile championship event against one of the strongest fields ever entered, in 120 minutes 27 seconds, but also captured the Pimlico handicap from scratch as well as the 5-mile race for stock touring cars.

The Warner Instrument Company, of Beloit, Wis., manufacturers of the Warner Auto Meter, have presented the New York Automobile Dealers' Association with a beautiful silver challenge trophy, to be competed for in the Trade Association's bowling league this fall. The bowling league will consist of at least ten teams, and alleys at the corner of Thirty-fourth street and Broadway have been secured. It is the intention of the Warner Instrument Company to offer duplicates of this trophy for competition in Boston, Philadelphia, Chicago and elsewhere, among the various local automobile dealers' trade associations. The trophy is for a perpetual challenge game.

The Garage Equipment Company has moved its factory to Milwaukee, about ten thousand square feet of floor space having been secured for the manufacture of their line. A large quantity of new machinery has been installed, and, while the company is practically thirty days behind with orders at present, it is positive that within a few weeks it will have caught up with back orders. This company is just placing on the market a new horn valve, and is also making a valve of the same type, having a cut-out in connection. This can be used on any exhaust pipe, and a whistle or horn can be attached. It also has a muffler cut-out in it, making it a four-way valve.

One of the most striking features of the perfect score results of the 150-mile cross-country reliability run of the Indianapolis Automobile Dealers' Association was the performance of the Rapid sight-seeing 'bus with its load of twelve passengers. The car was primarily designed for use at comparatively low speeds and on well-paved streets of a city, so that compelling it to keep a schedule of 16 miles an hour over country roads with its full load up was something considerably out of the ordinary. It was driven by an eighteen-year-old boy, who, moreover, did not know much of the road, but succeeded in bringing the Rapid through with a clean score.

More than two thousand Rambler cars have been sold throughout the Western Hemisphere since the first of last November, and Thomas B. Jeffery & Company announce in the "Nineteen-Eight Success Number" of the *Rambler Magazine* that they have not, so far, received a single complaint nor have they had to replace a single broken part. This is perhaps one of the most remarkable records of performance in the history of the industry, when it is considered that 1908 Ramblers have, as the maker says, been delivered to nearly every State in the Union. It proves that the day of the standardized car of absolute reliability is rapidly drawing near. The sales of the Rambler began immediately after the New York shows, and although New England and the Eastern States have taken their share, the bulk of the output has gone into the Middle and Far Western States.

A party was being shown through the factory of the Ford Motor Company by Master Mechanic Wills, and as they went through the assembling department one of them asked how long it required to assemble a car. Calling the foreman, Mr. Wills instructed him to build a car from the ground up. The start was made at 4:30. One group of men assembled the frame, another got the wheels and tires, then the engine, the transmission and the differential were mounted, the radiator placed in position, the body bolted down, the coil placed, the oiler and gasoline tank filled and the car started. Time, 14 minutes. It was a convincing demonstration of the absolute uniformity and interchangeability of parts. The average time per car required to assemble these cars is less than this, as ten cars an hour are turned out every day, but this is done by building a quantity at a time, a set of men for each operation.

Few people realize the extent to which electrically driven automobiles for business and pleasure purposes are being used at the present time. In Chicago alone there are over one thousand electrics used for pleasure purposes, and in such cities as Cleveland, O., Rochester and Syracuse, N. Y., Denver, Col., and Indianapolis, Ind., the number of electrics is very large. The majority of these cars are cared for at garages, and, while the rates charged are not excessive, a considerable decrease is effected when the electric vehicle can be housed on the premises, it being not unusual for a victoria or stanhope to be maintained at a cost of not over $15 per month, including charging and all repairs. In the majority of instances the current available is alternating, and before utilizing it for charging it is necessary that it be changed to a direct current. Recently a device known as a Mercury arc rectifier has been perfected. It is so simple that anyone can operate it, and low in cost. The Studebaker Automobile Company, of South Bend, Ind., is selling a great many of these rectifiers in connection with their electric cars, and claim that this device will do much to increase the sale and use of electric vehicles.

The Times Square Automobile Company has just purchased a large number of 1908 Orient buckboards, which they are offering at special prices. Such transactions are not unusual in the automobile trade, and yet it calls to mind the possibilities for growth in this industry. Here is a firm that began in 1903 to deal in second-hand cars only, and only in a very moderate way. To-day they occupy a four-story building in West Forty-eighth street, 50 by 150, with a two-story "L" 40 by 160, facing at 1599 Broadway, New York City, that is stacked from basement to roof with cars, accessories and supplies of every description. In addition, the company's branch store at 1332 Michigan avenue, Chicago, is closely pressing the parent store in volume of business. The company is prepared to buy for spot cash any quantity of new or second-hand cars where price and quality suit them, and the volume of yearly business runs now into the millions. These results are not accidental, but are due to the energy, pluck and sound business methods of which the treasurer and general manager, Jesse Froehlich, is the chief exponent.

PERSONAL TRADE MENTION.

Alexander Howell, who has been representing the Warner Instrument Company in New York City as chief salesman, has recently resigned his connection with that firm to accept a similar position with the Jones Speedometer Company. He will continue to have New York as his territory.

Albert C. Maucher, well known in Philadelphia automobiling circles by reason of his many notable performances on track and road with the cars represented there by the Quaker City Automobile Company, has just been promoted to the superintendency of that concern.

H. N. Anderson, formerly with the Dayton Motor Car Company, Dayton, O., has just joined the engineering forces of the Speedwell Motor Car Company, of the same city. The latter concern now have a large new plant in course of construction, and its business is now growing very rapidly.

Claire L. Barnes, sales manager of the Detroit Steel Products Company, Detroit, Mich., has tendered his resignation, to take effect in the near future, and will become manager of sales for The Billings & Spencer Company, Hartford, Conn., one of the largest manufacturers of drop forgings, machinists' tools and special machinery in the country. Mr. Barnes has had charge of the sales department of the Detroit Steel Products Company since its organization.

Ernest L. Smith, who is well known throughout the automobile industry, having been connected with the Timken Roller Bearing Company for several years past, has just become identified with the Standard Roller Bearing Company as its western representative. The latter concern announces the installation of a thoroughly equipped laboratory at its factory in Philadelphia. It is in charge of Walter H. Hart, an expert chemist, formerly with the Alan Wood Iron & Steel Company.

INFORMATION FOR AUTO USERS

"Perfection" License Indicators.—To comply with the numerous laws of the different States, the Automobile License Indicator Company, Lewisburg, Tenn., has brought out the device shown in the accompanying illustration. It is known as the "Perfection" license number indicator, and consists of a series of numerals, running from zero to nine, on each one of the five bands shown, while the sixth band at the right hand bears the State name or abbreviation, together with space for the number of the license issued by that State to the holder, as well as its legal speed limit. By loosening the thumb screw and turning the milled nuts at each end, any combination

OPERATING THE PERFECTION HANGER.

of figures up to 99,999 can be made, the type being 4 inches high by 1-2-inch face, while the ribbons of the indicator are made from a good quality opaque fabric which is non-stretchable and waterproof, although it is protected from the weather by a transparent celluloid covering. The same firm also makes the "Standard" license number indicator, which works on the card index system. Pockets take the place of ribbons, the five central ones containing celluloid or paraffine-coated cardboard cards, properly indexed and showing on their faces the ten numerals, zero to 9, while in the two end pockets are carried a series of cards bearing the State names. Changes of numbers and names are very simply and easily made.

Burrowes Number Hanger.—This device is one of several automobile specialties being placed on the market by the E. T. Burrowes Company, Portland, Me. The Burrowes number plate hanger is designed to be attached to the steering rod, axle or other convenient place, and the screw clamp draws it so tight that it cannot shake, rattle or wear the paint off the part to which it is fastened. Rattling is further prevented by a continuation of the strap, which forms a leather lining for the hook *F*. This hook is made of steel, and prevents the loss of the plate. The neat appearance of the hanger will be apparent from the accompanying illustration.

BURROWES ATTACHMENT.

Hydro Pneumatic Springs.—This is a device utilizing the combined resisting forces of air and oil, and is intended to take the place of the usual spring suspension. It consists of two cylinders, telescoping within one another. One of these holds a quantity of oil, while the second, or upper cylinder, contains an air chamber, in which the pressure may be regulated to suit the weight of the car. A clamp forming an extension of the lower cylinder is attached directly to the axle of the car, while the upper cylinder is bolted to the frame. The two cylinders are kept in accurate alignment by means of a special guide working through an outside bearing. The device is extremely simple and very effective in action. At first the oil absorbs more or less of the air and a little of the pressure is lost, but after this has been restored by a few strokes of the pump the device will give good service for the entire season without further attention. At the end of the season's running it is merely necessary to replace the oil, as it tends to gum in combination with the air.

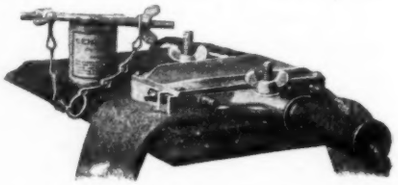
Running Board Sets.—In order to provide greater comfort on the small Ford, Maxwell, Reo and single cylinder Cadillac runabouts, the Jenkins Specialty Manufacturing Company, Sumter, S. C., has brought out sets of running boards designed to fit these various small cars. They are made of the best grade seasoned poplar, which is noted for its light weight and strength. After careful seasoning, they are painted all over to keep out moisture, and are then covered with the best grade of Goodrich rubber in red or gray, and are finished with attractive brass binding specially designed for this purpose. The supports are made of pressed steel in attractive designs.

SPECIAL RUNNING BOARDS FOR RUNABOUTS.

The same firm also makes a line of slip covers in linen or khaki, for the same cars, as well as chain boots of leather, hoods, mud splashers, under pans of hard fiber and the like.

Brown Four-cycle Compressometer.—This is a handy little instrument made by The Brown Company, Syracuse, N. Y., and is designed to enable the compression of a motor cylinder to be obtained very simply and conveniently. It is a matter of common knowledge that loss of compression is one of the most frequent causes of lost power, and the use of the Compressometer will readily show exactly which cylinder is at fault. It is particularly essential that the compression of the various cylinders of a multi-cylinder motor should be uniform, and the Compressometer offers a ready means of determining this. It is only necessary to screw it into the cylinder in place of the spark plug, turning the motor over by hand, when the gauge, which is calibrated in pounds per square inch, will immediately show the pressure. But the motor should not be run with the instrument in place. The reading of the maximum hand with which the instrument is equipped will show how high the pointer goes without the necessity of watching it. The Compressometer is equally valuable for marine use, as it can be employed to test the vacuum in the crankcase of a two-cycle motor, thus readily detecting crankcase leaks, The Brown Company having just brought out a special combination instrument for this purpose. The crankcase vacuum and pressure are taken from the base by a 1-8-inch nipple, while by inserting it in the cylinder head in the usual manner the maximum compression is registered.

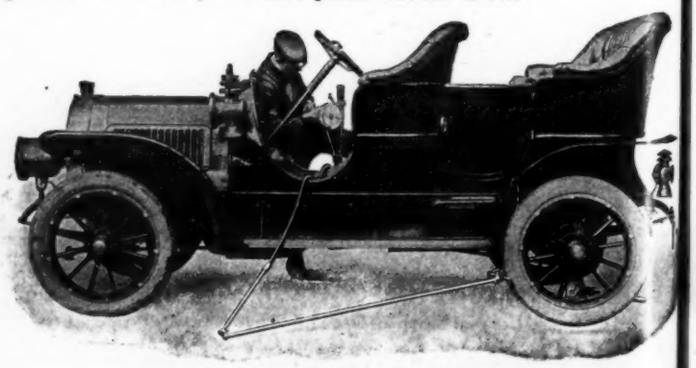
Shaler Electric Vulcanizers.—There is nothing to which the old adage about the stitch in time applies with so much force as to repairs to pneumatic tires. By promptly repairing all cuts and holes,



SHALER ELECTRIC VULCANIZER IN USE.

a set of tires may not only be made to last twice as long, but will be in a dependable condition throughout their life of service. To make it possible to do this, the C. A. Shaler Company, Waupun, Wis., manufacture a handy electric vulcanizer, which is simplicity itself and may be used by the autoist or garageman without any previous experience in the repairing of pneumatic tires as the makers supply explicit directions as well as the necessary materials. There is no risk of injuring the tire, as the heat may be positively controlled so that the vulcanizer requires but a minimum of attention and does not need to be watched.

Coates Auto Buffing Outfits.—There has been a demand for a power-driven buffing outfit for keeping the bright work on a car clean, and while the electric type manufactured by the Coates Clipper Manufacturing Company, Worcester, Mass., has met with tremendous sale, the expense where alternating current was used was sometimes prohibitive. To overcome this, the same makers have just put a friction-driven outfit on the market. It is run by friction from the rear wheel, the latter being raised by a jack, while the roller is held in position by a patented device designed for the purpose. To save the expense of a long flexible shaft, a jointed rod is supplied for the greater part of the drive, the remainder being through a Coates patent flexible shaft.



HOW THE COATES AUTO BUFFING OUTFITS ARE EMPLOYED FOR POLISHING